JULY 2025 VOLUME 22 ISSUE 7

THE LOGGER'S BARK

a magazine

Radio Club of Tacoma

New!

The T41-EP—a DIY SDR!

Page 101

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Cover:

W7DK Field Day 2025
Four AB577 Rocket Launcher Towers L>R:
1. 20m Yagi
2. 6M Yagi
3. 10m Yagi
4. 15m Yagi
5. Main Ops Tent
Photo by W7UUU

W7DK 2025 Officers and Committee Leaders

Executive Committee:

President:	Adam Barbera W2NCC
Vice President:	Manny Adonis AD7MA
Secretary:	Gary McAdams WG7X
Treasurer:	(Acting) Doug Schafer AB7DG

Board of directors:

Board:	Mike Drorbaugh W7MKE
Board:	Paul Matney W7PFU
Board:	Doug Schafer AB7DG
Board:	Dan Vacanti KD7SV
Board:	Dave Ashley W7GEL

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Membership:	Mike W7XH
Salmon Run:	Mike W7XH
Infotech/IT:	Randy WB4SPB
HF Operations:	Phil K7PIA
Facilities:	Adam W2NCC
Property Mgmt.	Red WB7EC
Museum:	Dan KD7SV
Planning:	Manny AD7MA
POTA:	BJ KO7T
General Meeting:	Dave W7UUU
Bark layout & Editor:	Dave W7UUU
Assistant/Copy Editor:	Anne N7ANN

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xx=nothing submitted

But don't stop there! Each issue is 50 or more pages of fun and cool stuff to explore! Scroll on!

Have a submission for our next issue?

loggersbark@gmail.com

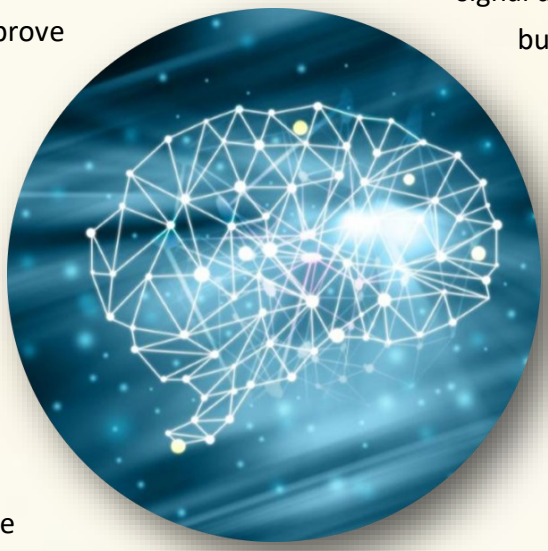
PRESIDENT'S CORNER

Monthly ruminations from our President

Adam Barbera W2NCC

CAN WEAK SIGNALS BE DECODED BY MACHINE LEARNING AND AI?

Is machine learning (ML) capable of decoding weak signals? Amateur radio has always embraced innovation to advance the art of communication. From spark-gap transmitters to DSP, waterfall displays, and digital modes like FT8, hams have continually adopted new technologies that improve how we connect.



Now, machine learning (ML) and artificial intelligence (AI) are emerging as the next frontier. These technologies are being developed to enhance our ability to decode radio signals—especially those that are faint, buried in noise, or obscured by propagation effects. ML could prove to be a game-changer in pulling out signals that traditional tools can't reach.

Weak signals are a constant challenge across all bands. Operators contend with fading (QSB), interference (QRM), atmospheric noise (QRN), multipath distortion, and other propagation factors. While digital modes like JT65, FT8, and even CW are engineered for low-SNR environments, there are still times when signals fall below the decoding threshold. Traditional digital signal processing (DSP) can help—but only up to a point. Push it too far, and you begin to lose the signal along with the noise. That's where ML has an edge.

Unlike fixed DSP algorithms, ML models can dynamically adapt. Once trained on large datasets, learning algorithms can distinguish real signals from random noise patterns—even when conditions are extremely poor.

ML offers several promising advantages. It can improve signal detection, extracting messages buried deep in the noise. Pattern recognition capabilities allow it to "learn" what legitimate ham signals look like. It can also help correct for issues like phase shifts, Doppler effects, and other signal distortions. Perhaps most notably, ML can suppress noise more effectively without degrading the desired signal—especially when the signal-to-noise ratio is near zero.

Importantly, machine learning isn't about replacing the operator—it's about extending what's possible. Just as we welcomed digital modes and SDRs, we can now explore how ML might help us decode signals that were once lost to the ether. This technology will continue to evolve, and before long, weak-signal ML tools may be built right into our transceivers.

73,

-Adam Barbera, W2NCC

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SECRETARY'S REPORT

W7DK Secretary—Gary WG7X

HELLO AGAIN CAMPERS! WELL, SUMMER IS HERE AND it's time for outdoor activities again! By the time you read this, Field Day will be history, and the 4th of July is on the near horizon.

We should remember that this will be our nation's 249th Birthday and not forget the principles that our nation was founded upon while we enjoy the (hopefully) nice weather and outdoor BBQing!

Be safe with the celebrations; we expect everyone to have fun but not to literally "Set the world on fire!". Here at radio WG7X, we'll probably go over the hill to Steilacoom for their Fourth of July celebrations. I've never been there, but the family has, and they've told me that it's really very nice. So, I think we'll try that one out this year.

Looking forward to the rest of summer, it looks like a hot one, so we should all take precautions to ensure that we don't get too sunburned! Please don't drink and drive either!

In July, we, the Radio Club of Tacoma will be going to the Cheney Stadium for one day at the old ball game! July 24th 2025 at 1900 (7:00PM for you civilian types). An American tradition sponsored by Al Ferguson N7OMS. Details of this event are on the front page of the RCT website [as well as on page xx of this *Logger's Bark* edition –*editor*].

So, let's all go to the ball game, OK?!

All together now!

Take me out to the ball game,
Take me out with the crowd;
Buy me some peanuts and Cracker Jack,
I don't care if I never get back.
Let me root, root, root for the home team
If they don't win, it's a shame.
For it's one, two, three strikes, you're out,
At the old ball game!

There we go! I knew you could do it! -*Gary WG7X*

FRESH OFF THE SEAPAC CONVENTION IN SEASIDE, Oregon, I have to say I had a great time this year! It's always fun to get there on Thursday to settle into the Seaside vibe before the show, and meet up with friends in town doing the same. I mostly come for the swap meet action, and to be a presenter on Saturday morning.

My presentation was in the Seaside B room upstairs in the convention hall at 11:00 on Saturday, and was on "Limited space and HOA stealth antennas" complete with a couple of short videos demonstrating actual antennas in use. The room was packed—standing room only, and even that space was taken up with attendees.

In the swap meet, the crowds seemed far greater than in years past. It was packed! I think there were more vendors as well—the rows of tables seemed closer than ever, resulting in very narrow isles. That made for difficult browsing. It could certainly be argued that I think Sea-Pac has outgrown the small Seaside Convention Center.

Hallicrafters CB-6 Little Fone transceiver

I **found a few goodies to bring home**—including a beautiful Leeds & Northrup Wheatstone Bridge meter from 1940 that looks like it rarely got used. I also found a collector-quality Hallicrafters CB-6 "Little Fone" handheld transceiver for 11-meters (!!). Normally I wouldn't be attracted to CB gear but I love all things Hallicrafters so couldn't pass it up for $10, which included the original leather carrying case also in superb condition. The 9-transistor 190 mW rig works perfectly!

I also spent some time perusing the manufacturer booths as well. It's always fun to see what the "new and cool" is from the big names. SteppIR was notably absent however—and it was just a day or two after the show I learned they were shutting down their ham radio division. Very sad. See the full write-up of this in this issue's Antenna Time section.

But I do have to wonder how much longer events like Sea-Pac will remain relevant. It's not cheap to attend for anyone who isn't local. So much of the information presented both in the seminars as well as the manufacturer booths can easily be gleaned from internet sources these days. Time will tell.

For me, I will keep attending Sea-Pac for as long as they hold it if for no other reason than getting some away time on the Oregon coast. Seaside really is a lovely little town with a lot to offer.

-Dave W7UUU

IT ALL STARTED IN 1915 WITH JUST EIGHT YOUNG MEN who gathered in homes, eager to learn about radio communications. Within a year, the Radio Club of Tacoma was officially formed with seventeen charter members. United by a shared passion and adventurous spirit, the club made a bold move in 1927—purchasing three parcels of land at a county tax sale. By selling part of the property, 45 members secured a $300 loan to construct the club's first clubhouse.

If you'd like to read more about the history of the Radio Club of Tacoma, click HERE.

Our current clubhouse was purchased in 1958, and the mortgage was fully paid off just two years later, in 1960. The men and women who stood shoulder to shoulder to grow the club were true pioneers and visionaries.

Fast forward to 2025: today, we are a thriving club with more than 400 members. Our clubhouse is often filled to capacity during Saturday open houses. Activities include Technician, General, and Extra licensing classes, VE sessions both at the club and at Joint Base Lewis-McChord, kit building, antenna construction, tech bench projects, radio museum repair and activation, HF station training, ARES, POTA, Field Day, Winter Field Day, our Bigfoot Special Event Station, and *much* more.

We are fortunate to have so many members who roll up their sleeves and carry the load. And we know there are still many more whose talents have yet to shine. Let's make space for them, and encourage the next generation of pioneers and visionaries to help write the future of our club as we celebrate 110 years of history.

The original Radio Club of Tacoma clubhouse, here shown in 1931 hosting the ARRL Northwestern Division Convention. The club hosted this event several times in the 1930s, which now takes place in Seaside, Oregon at the Sea-Pac convention. Photo: RCT Archives -editor

Finally, I'd like to recognize a special group of members who have supported the Radio Club of Tacoma for more than 30 years. This tribute doesn't begin to cover all those who have contributed in roles such as officers, board members, trainers, educators, VEs, VE liaisons, committee chairs, editors, property managers, librarians, activity coordinators, and countless others. But to those who've stood the test of time—thank you.

-Mike W7XH, Membership Chair

30-39 Years a Member:

John Wheeler	KA7RMG
John Thomas	N7JFM
Ronald McCallister	N7FYA
Gary McAdams	WG7X
Chris Chowen	KK7RFI
Dave Brooks	N7HT
Jeff Freedman	K7JF
Carl Rosevear	KB7LIG
Kathleen Nace	NOEYK
Jerry Cerny	W7JC
Patrick Moore	KG7KM
David Burke	N7PKG
Bob Crelling	N7QOZ
Robert Schlegel	N7BH
Brendan Keyport	WA7BMK
Rob Lee	K7TGU
Ken Scott	KB7UXT
Mark Terjeson	N7FIT
Mark Rader	KC7AFO
Pam Terjeson	KC7AZV
Steve Terjeson	KC7AZW
Brian Terjeson	..
Dennis Farnes	KA7IIV
Al Burleson	K7HW
Robert Cook	AB7TW
Larry Watson	KD4VOM

40-49 Years a Member:

Jerry Hathaway	K7ETU
Jeff Hanson	W7JFF
Judy Kirkreit	AJ7R
Joe Pavia	KD7LJ
Angela Korn	KC7EQ
Bob Mizener	N7BUW
Paige Butler	WOFLZ
Marie Fuller	KA7HEG
Scott Peterson	KA7IOX
Tom Smith	N7CFI
Mark Matthies	W7MRK
Harry Wong	N7DOE
Jeff Smythe	KB7QAG
Armin Keen	N7JAJ

50-55 Years a Member:

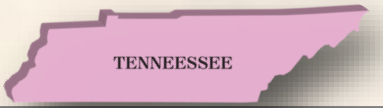
Jean Wheeler	W7OII
Bob Bain	WB7CQV
Marvin Wheeler	KG7V
Rick Leary	W7LKG
Nick Olson	N7BCV
Tim Timblin	K7HF
Dave Ellison	W7UUU
Nick Winter recent SK	K7MO

65+ Years a Member:

Jan Gilbertson	K7HTU
Jack Hegseth	K7DBU
Bob Heselberg	K7MXE
Steve Dightman recent SK	AF7YD

A special acknowledgment to those that support our club from across the country and internationally. We are honored that you find value in supporting us. This is in large part due to the readership of the 2024 & 2025 *Logger's Bark* magazine & newsletter around the U.S. and the world. It is very humbling and we are thankful for your support.

Nick Olson	N7BCV	Arizona
Judy Kirkreit	AJ7R	Arizona
Tony Garza	KI7LYU	Arizona
Dave Hutchison	WOJKT	Arizona
John Carter	N6YU	California
Buzz Dean	KB7FD	California
Dick Johnson	KA6HUM	California
Mike Hyman	K6DBF	California
Lloyd Kimball	NONHJ	Colorado
Paul Signorelli	WORW	Colorado
Ronald DeAngelis	NZ4X	Florida
Ed Doyle	K3ENV	Florida
Lenny Sechrist	WS8O	Florida
Rich Patrick	KR7W	Idaho
Larry McElhiney	AC9OX	Indiana
Max Mackersie	KK7HAY	Michigan
Michael Stark	KB8KB	Michigan
Marc Hutchins	K8MH	Michigan
David Kelley	KI7QQC	Montana
Frederick Freer	K8IG	Ohio
Jerry Hathaway	K7ETU	Oregon
Greg Wilde	AE4GW	Tennessee
Andy Willms	KE7RTB	Texas
Marie Redd	KF7SOX	Texas
Kelly Copley	AE5II	Texas
Shawn Whitmore	K5DDV	Texas
Jeffrey Isakson	W7JSJ	Virginia
Donald Landes	WX4C	Virginia
Pascal Carre	F4LPH	France



HAM RADIO WORLD NEWS

Amateur radio events from around the world

Web

US NATIONAL LIGHTHOUSE-LIGHTSHIP WEEKEND (NLLW)

Celebrating National Lighthouse Day

Coinciding with the US National Lighthouse Day, the US National Lighthouse-Lightship Weekend (NLLW) is an annual lighthouse operating and activation opportunity celebrating the anniversary of the establishment of the United States federal lighthouse service. This is a day to celebrate lighthouses, lightships and the commitment and service of those who tended America's lights for generations.

Dates

National Lighthouse Day is unofficially August 7th each year. This is Thursday August 7th for 2025 making the following weekend the event dates of August 9th and 10th. If you are considering operating for the NLLW for 2025, put these dates on your calendar…

August 9th & 10th, 2025

Radio competition for this weekend

As usual there is no shortage of other operating activities this weekend including the popular North American QSO Party CW mode. Review WA7BNM's Contest Calendar for other events competing for the bands.

Click either image this page to visit site

As this is an operating event and not a contest, all amateur radio bands are available including the WARC bands.

Activate!

Interested? Plan on helping celebrate the National Lighthouse Day by coordinating with administrators of your favorite lighthouse to set up a temporary radio station and get that light on the air.

-From www.arlhs.com

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email loggersbark@gmail.com

ARRL NEWS & VIEWS

W1AW

HAM RADIO REPORTS FIRE; HELICOPTER CREW EXTINGUISHES JUST IN TIME

By John Ross, KD8IDJ

With the help of amateur radio operators, a potential wildfire was averted in California on June 12. Amateur "ham" radio is a thriving technical hobby with members active all over the world. Hams often operate from remote locations, and several of them wound up in the right place at the right time while preparing to participate in the 2025 ARRL June VHF Contest.

Robert "Bobby" Debevec, W6IWN, and Jacob T. "Jake" Graham, KC7WXD, both ARRL members from the Reno, Nevada area, were hiking on the Grouse Ridge Trail in California, a section of the Tahoe National Forest. In addition to getting ready for the contest, they had hoped to also activate several Summits on the Air (SOTA) locations. Their day of using the Amateur Radio Service for recreation was going well until they saw smoke near the Black Buttes area and had to use it for its utility value.

Debevec captured the event on video, and posted it to his YouTube channel.

Jake Graham, KC7WXD, listens to the U.S. Forest Service radio channel as dispatchers relay their report to a helicopter crew. Bobby Debevec, W6IWN, photo via YouTube

"I was surprised to see smoke ahead of us," said Graham. "As we got closer, it was clear there had been a lighting hit several days ago and we could also see flames."

Wireless service is spotty in portions of the eastern Sierra, and they didn't have a cell signal, so Debevec used his handheld ham radio to report the fire on a nearby repeater. In just seconds, Dan Patterson, W6AI, responded back. He was monitoring the Nevada County Amateur Radio Club linked repeater system in Grass Valley, California, and heard the call. He took the GPS coordinates from Graham and notified the U.S. Forest Service.

"We were monitoring the U.S Forest Service and it only took about 10 minutes for them to dispatch a helicopter to the area," said Graham. "We watched four firefighters rappel down followed by a pack of equipment. The pair then walked closer to the area and started talking to the crew, who thanked them for the report.

"They put out the fires but radioed for a helicopter water drop, before they left on foot, with the gear, to a nearby pickup site," added Debevec.

After the firefighters left, the winds picked up dramatically. Had that happened earlier, the outcome could have much worse. Amateur radio serves communities before and When All Else Fails®, and having a thriving group of trained operators active in amateur radio allowed it to facilitate emergency communications that saved the day.

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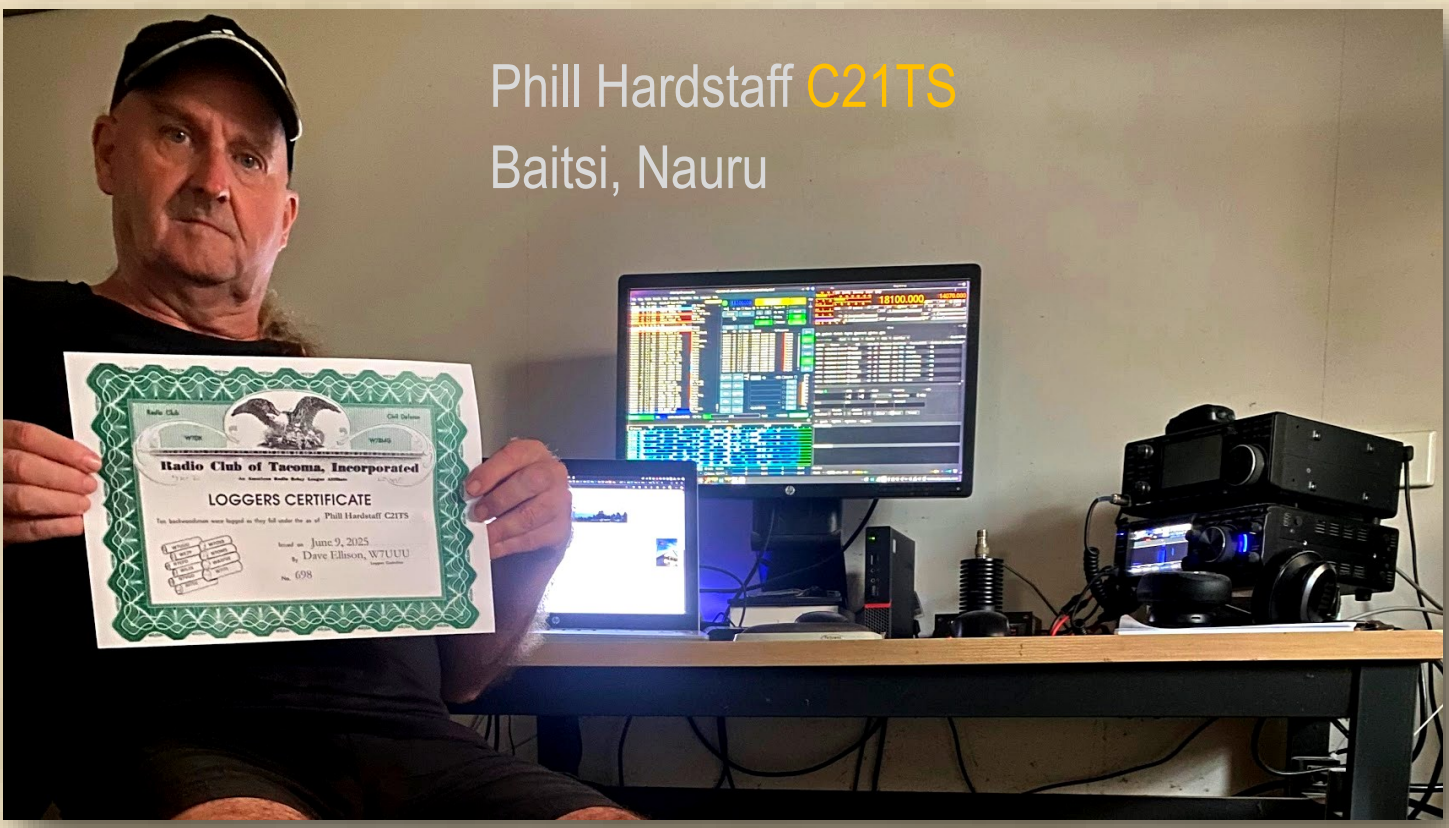
THE MAILBAG

LETTERS To The Editor

W7UUU



Hi Dave,

I just read the last Loggers Bark, interesting read. Saw the certificate thing and see we have worked a few times. So hey, why not! This [ADIF file submitted] is from the log of C21TS. This would be your one and only certificate for Nauru!

2 ADIF files attached with descriptive names. Reckon I might have made the 10 threshold. It didn't say anywhere these were just for US calls?

The club looks great, so great to see in 2025 something like this still exists and is very, very active.

If per chance you are going to mail me something I'll give you my Mum's address in Australia. Mail to here goes into a blackhole somewhere over the Pacific.

73 Phill C21TS and also FK1TS / 3D2TS

Dear Phill,

I cannot tell you how delighted I am to have issued you our first DX Logger's Certificate in its 68 year existence, and as you say, to a most exotic location that will likely never have another one issued—the country of Nauru in the South Pacific!

Your certificate has been posted to your Mum's address as requested!

Thanks so much—this is truly a milestone for the club!

-73 Dave W7UUU

To the Editor,

Hey Dave—it's John from QRZ. I love to read your magazine every month. I don't know how you find time to write so many great articles every month—wow!

Anyway, I have a silly question. I notice you make most callsigns be red. But then others, like your club call W7DK and W7OS you don't. And one time recently, you did W1AW as red one time and then in the same paragraph, you did the same call sign but it *wasn't* red.

Is this some sort of system or code and does it mean something? Or just a typo?

73—John in Texas (*requested his call sign be withheld*)

Thanks for the kind words, John. But I have to laugh—of all the minutia I work into The Bark, I never thought anyone would notice this one little bit.

So yes, there is a system to it. I "red" the call signs of actual ham radio operators, but not the call sign of clubs or organizations. So W7DK and W7OS (the RCT call sign and the Doc Spike Museum call sign respectively). But in the case of W1AW, the article you referenced talked about Hiram Percy Maxim who held W1AW originally, but then it became the call sign of the ARRL as W1AW. So that's the primary reason. Sometimes, for contrast reasons, I use an orange-yellow highlight so it stands out on a darker background. I like to do this to make sure that hams that I mention in articles get their call signs seen by the readers of The Bark.

Of course, other times, Anne N7ANN and I simply miss it during one of our hours-long proofreading sessions and it's just a plain old typo.

So now you know!

73—Dave W7UUU

To the Editor,

Hi Dave! I notice you have a birthday in June as do I. So from one June baby to another, Many happy returns on the day!!

I notice that you said you don't use AI for any of the text of articles - by that I hope you mean 'Artificial Intelligence.' However, for many of us, AI is a common feature in our lives, and by AI, I mean 'ACTUAL IDIOCY!' Hi Hi!!

Again, Happy Birthday from a former PNW-er (19 plus years - from 1963 to 1965 while dad was assigned to Oak Harbor NAS, and from 1975 to 1994 - US Army and lots of college and post-grad edumacation).

73 de KA7SSR

Jim Vineyard
Pleasanton, TX

Nice to hear from you again in a Bark *email, Jim! Thanks for the birthday wishes and the same back to you.*

Yes it's true there is a lot of "actual idiocy" out in the world these days—more than enough to go around it seems. But you are correct: as long as I'm Editor of The Logger's Bark, there won't be any AI-written articles of the ChatGPT sort published. But as for the other kind, well that might happen from time to time!

Thanks for the kind words.

73—Dave W7UUU

From QRZ,

Good issue… as usual. Always several interesting topics. Fahnestock Clip… never knew it was called that!

Steve WD4DXQ
Lindale, Georgia

Fahnestock Clip!

From QRZ,

Hey, Dave, don't know how you are able put together such a detailed newsletter. Seems like a lot of work.

However, I need to thank you about the Wilson HT segment [June issue], for reminding me, that that was my *very first ham radio*, that I had completely forgotten about back in the 70's. Believe it or not, I went on eBay to see if one was there and, I found one (and only one) for about $5.00 and bought it.

Don't know if it works but it might be fun to investigate it and make it work (if possible).

Bill K2WH
Hewitt, NJ

***Bill**—I'm so glad my article on the Wilson took you to a cool place!*

-73 Dave W7UUU

From QRZ,

Hello Dave,

Merci beaucoup! Thank you so much again for your online magazine. A little question: to join your club and support your work, do I have to be a member of the ARRL?

Pascal F4LPH
Ballan-Miré , France

***Pascal**—thank you so much for joining the Radio Club of Tacoma! You are our first member from France and this is wonderful. Our club welcomes you with open arms and kind regards.*

Vy 73—Merci beaucoup en effet!
Dave W7UUU

From QRZ,

Enjoyed the Echophone article.

Hard to say how many - if any - made it to the PTO or Europe. No AC power for most.

I had thought the Echophone would compete with the S-38 but.... "One of the most popular shortwave radios ever made, the charming Hallicrafters S-38 introduced many thousands of people to shortwave and CW listening. It appeared in 1946, immediately after the World War II consumer radio hiatus, and was priced at only $47.50, making it the entry-level receiver for the Hallicrafters line."

Since the EC-1 was "Allowed" by the U.S. government, I suppose it was the only real offering made available to the public - bought for home use in the USA.

Thanks for the magazine and the research!

Don KL7KN
JBER, Alaska

Last month, *we received an email from a ham in France asking about becoming a member of the RCT. He had learned about the club via The Logger's Bark as published on QRZ.com and was very interested in supporting RCT. He reached out to me privately and I steered him to Mike W7XH, Membership Chairman. So recently Pascal Carre F4LPH became the club's first DX member!*

His message to Mike:

Bonjour Mike,

Yes, Mike, you can include my photo in your magazine! *-Pascal F4LPH*

Pascal Carre, F4LPH
Ballan-Miré, France
Our first International Member

Dear Editor Dave,

In the May 2025 Bark, I read your very well written article, 'How FT8 Works' with keen interest. I am not, nor do I desire to be, an FT8 operator (never say never). The hook I bit on is the red text second paragraph directed at readers who "Hate All Things FT8". Kind of reminded me of a 'Wet Paint' sign... it's hard to walk away, I've got to touch the paint.

Almost 20 years ago, when PSK-31 became the digital rage, before Plug-n-Play IC-7300s, I wanted to see if I could build a gizmo to marry my PC with my HF Radio. I ended up making many PSK-31 QSOs. Enjoyable to me because PSK can be a Verbose mode of comms. Many PSK ops had lost their hearing, or in their old age developed a palsy that prevented them using CW but could select canned messages and push ENTER. I regularly had QSOs with a retired newspaper editor or reporter. Verbose. Kind of like CW Rag Chewing- very much unlike FT8. After a year I moved away from PSK and back to my roots - CW.

The Bark's FT8 article created some interest in a ham email pen pal round table group that I sometimes participate in. The biggest FT-8 complaint was something like: Ya can't use it to pass EmComm types of messages. The Bark article points this out- and I can't disagree.

This got me wondering what other modes does the typical FT8 operator have available to them in their ham shack. And what percentage of their Butt In Chair shack time is dedicated to FT8? These questions were also pondered: Does the op have a VHF/UHF station for QSOs using repeaters or simplex? Does the op belong to an Emcom group? Do they ever use their FT8 HF radio to make SSB QSOs? How about Morse Code? Do they have a Winlink email address and use HF Winlink?

I have no qualms with hams using FT8, as long as it doesn't raise my taxes or bring harm to my family or property. What I do like about FT8, like any mode used on HF, is that the ham op must know how to use their radio equipment, their PC, setting up a useable antenna, and possibly more- like knowing which drawer their microphone or Morse key is located- in just in case the desire arises.

-Rich KR7W

Thanks for the detailed report and commentary. In response to your email, in this issue you will find (or have already found) an article all about JS8CALL—a branch of FT8 that in fact does all the things you desire while maintaining the robust decoding tech that makes FT8 so great.

-Dave W7UUU

W7DK LIVING HISTORIES

Member video interviews and profiles

BACK IN 2015, when I was helping to organize the W7DK Centennial Banquet and Celebration, I asked about possibly recording video interviews of club members for future generations to learn more about those that came before them. However, that plan like so many things in life, sort of slipped by the wayside and I truly regret not revisiting such a project much sooner.

The fairly recent loss of our most senior member, Worth Gurley, W7WG, a true friend to all who knew him and to strangers alike, reminded me of the extreme importance of capturing aspects of our members lives and involvements not in only ham radio, but also with the Radio Club of Tacoma. So I've finally got that "round TUIT" that I should have found sooner and have embarked on recording what I am calling the W7DK Living Histories Project. For this effort I video a short (15-20 minute) interview with our members in a free-form format to allow them to share some insights into how they came to amateur radio, and how they became involved with the Radio Club of Tacoma.

Click picture to watch the video

At the June General Meeting, I presented the Living History video of my very dear long-time friend of over 50 years, who sadly passed away on March 6th before his video was completed. It features Joseph Nicholas "Nick" Winter Jr., K7MO (formerly WA7IVO). I shot the footage at his home in the fall, and I have to say of all of the videos I've produced for this series, Nick's was about the only one that required virtually zero editing! He had such a great voice and presentation style—and despite his long career as a broadcast engineer, he really should have spent some time behind the microphone instead of in the transmitter room!

This video was intended to be the first of a series of three, but of course that was never meant to be.

Even if you never knew Nick or only knew him in passing at the club, please take some time to view his video and share it with any ham friends who might have known him.

-Dave W7UUU

W7DK LOGGER'S CERTIFICATE

Classic "first award" for Members

HAVE YOU APPLIED for your own W7DK Logger's Certificate?! It's FREE and it's EASY! All you have to do is work at least 10 members of the Radio Club of Tacoma, then send in your list of call signs worked, and BAM! We'll print out your certificate and get it to you toot sweet by US Mail.

There are no confirmations required, no logs to submit, and really no rules other than the call signs you submit must be members of the club. You may work them on HF, 2m FM, on FT8 or SSB or any other mode! In fact, one of the best ways to get your 10 contacts is to check into the weekly Tuesday Night Net on the 147.28 club repeater… every Tuesday at 7:30 PM.

This venerable award was first launched in 1957, using certificate paper printed by club member Dick Ryan, W7RGD using a donated printing setup.

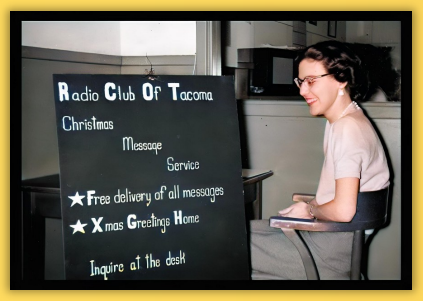
As of the date of this publication, there have been almost 700 certificates issued, including a few reissues over the years to replace lost certificates.

The original certificates were hand-lettered by long-time RCT member Barbara Osborne, W7UYL (SK 2022), and all of the records were kept in a series of recipe boxes still held by the club.

We still have a huge stash of this beautiful OFFICIAL logger's Certificate paper…. So if you do not already have yours, just shoot us an email with your list of call signs worked, and put "Logger's Certificate" in the subject line… ■ *-editor*

Wanna get yours? Send in those contacts!

Barbara Osborne W7UYL in 1955 an RCT USO event



Our FIRST EVER DX certificate! #698 goes to Phil Hardstaff C21TS in far-off Nauru in the South Pacific!

W7DK LOGGER'S CERTIFICATE

SEARCH YOUR LOGS!!! GET *YOUR* CERTIFICATE!

THE W7DK RADIO CLUB OF TACOMA LOGGER'S CERTIFICATE is available to *anyone anywhere who has worked at least 10 members of the club*. It's a long-held club tradition to issue these certificates, with just shy of 700 having been produced since the start of the program in 1957.

Are you active on the HF bands? If you are, it's entirely possible you already have all the contacts you need to get your own Logger's Certificate! And it's really easy to search this.

Almost all modern computer logging systems have a way to search for the county of stations you have worked. For example, in the popular N3FJP Amateur Contact Log (ACL), to find stations that could possibly be W7DK members, just go to the "County" field in the ACL interface, then click "Search". If you have at least 10 results come back, send me the list and I will check to see how many are members!

For those who use QRZ's powerful logbook software, just open your main logbook, click the pulldown menu for "Filter" and select "New". In the "Filter Name" box you could call it "Logger's Certificate" (and then "save" if you want to use this rule in the future) - then in "Select Field" select "Their County", then for "State" pick WA for Washington, and lastly "Compare Value" set to "Pierce County, WA". Lastly, click "Add Rule". Once you do this, you will now see only those logged QSOs that the other station reported Pierce County. Since the Radio Club of Tacoma is in that county, your likelihood of pulling up club members is very high.

Regardless of the logging software you use, most should have a means for searching out county information.

Just note that if you find "Special Event" call signs such as W7F, W7B, etc., those don't count as multiple operators share those call signs during the club's Bigfoot event every October. Only actual FCC-assigned call signs count for the Logger's Certificate. The club call of W7DK or the museum call of W7OS are considered acceptable to use.

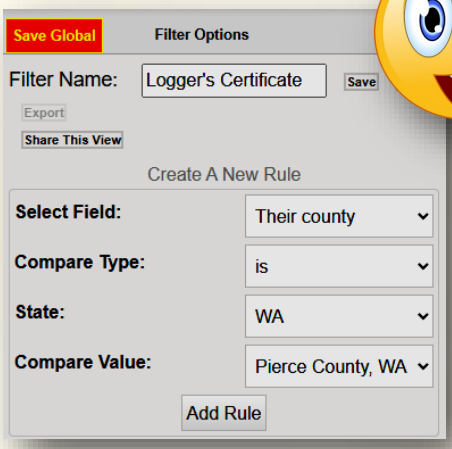
Also consider filtering for Kitsap County (where I live) as we have a number of members there. You could also include King County, but I warn you: it's the largest county in the state, and has a lot of hams—most of whom will not be W7DK members. Searching there will result in a huge list without many "hits".

Wanna get yours? Send in those contacts!

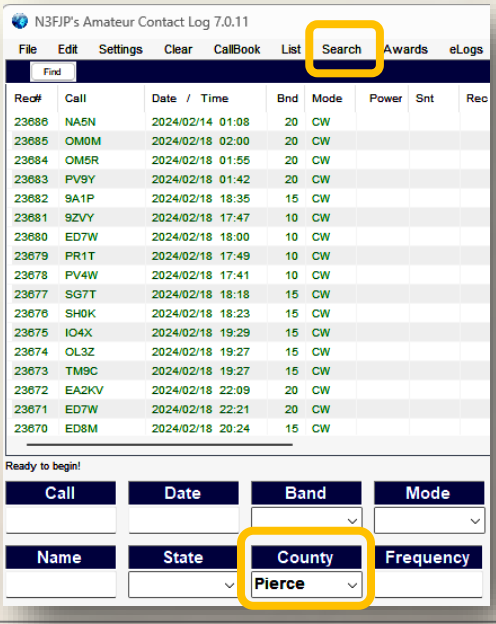
Then just email me the list of calls—you don't need to include anything else: it's the Honor System. I won't be confirming anything other than if the call sign is (or ever was) a member of the club.

So start SEARCHING! I will send you your own beautiful Logger's Certificate free of charge—mailed to your listed QRZ mailing address. In return, just send me a photo of you holding your certificate and I will run that in a future issue of The Logger's Bark!

-Dave W7UUU



Above: *Custom Filter dialog for QRZ Logbook—just search for State=WA, and Value=Pierce (or Kitsap) County*



Left: *Using N3FJP Amateur Contact Log, simply enter Pierce (or Kitsap) for the County field, then click "Search" to see a list of calls from these counties*

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email loggersbark@gmail.com

MEMBER SPOTLIGHT?

Clifford J. "Doc" Spike

W7OS

Clifford J. "Doc" Spike, W7OS (1900–1991), was a revered founding member (#28) of the Radio Club of Tacoma and a longtime Tacoma dentist. Passionate about preserving radio heritage, he served as an officer, historian, and archivist. Following his passing, the club honored his legacy by naming the W7OS Antique Radio Museum after him. This museum, housed in the club's upper-level across from the HF Room, features restored vintage transmitters and receivers—including equipment dating from the 1940s–1960s—and continues to transmit under the call sign W7OS, especially during events like Straight Key Night. His impact is also commemorated annually through the "Doc Spike Inspirational Award," granted to members who best embody his dedication for their years of service to the club—often in many capacities. Doc was awarded the first plaque for his 50+ years of service to the club in 1976. Your editor knew Doc Spike very well—he was a friend and really great guy I'll always remember.

ASK ELMER!

Mystery Elmer

Dear Mr. Elmer,

I had the opportunity to visit your club about a year ago during one of your Saturday open house events. While I'm not currently a licensed ham, I've been considering it. My reasons are fairly specific. I'm not approaching this as a hobby, but rather as a practical tool. My goal is to establish a reliable means of communication within the Puget Sound region in the event of a major disaster—such as a Cascadia subduction zone earthquake, a Mount Rainier eruption, or potentially both. I'm not interested in long-distance contacts; I'm focused on staying connected locally, within roughly a 50 to 60 mile radius.

During my visit, I explored the upstairs radio room, where I was told a contest was in progress. Most of the stations I heard were from far-off locations, which was impressive, but not aligned with the kind of communication I'm hoping to achieve.

Would pursuing a ham license be a good solution for this type of local emergency communication? Or are there more appropriate alternatives I should consider?

Also, I really enjoyed my visit to the clubhouse—everyone was very friendly, and I appreciated the warm welcome.

–Waiting for the Big One

Dear Waiting,

Thank you for your thoughtful note and for visiting the club—I'm glad to hear you had a good experience during one of our open house events. You've raised an important concern that a lot of people have these days. Reliable local communication during a regional disaster is not only practical—it's essential.

To answer your question: yes, pursuing an Amateur Radio license could be a very good fit, but it depends on how much flexibility, range, and independence you're looking for. The 2m and 70cm ham bands with appropriate antennas and adequate power could fairly easily achieve your distance needs—definitely via repeaters, and it would certainly be possible using simplex with enough power and the right antenna configuration.

But you do have to have a license—it's not hard to pass the 35-question Technician class test, and you can take a training class right at the Radio Club of Tacoma (see the club website for details).

GMRS (General Mobile Radio Service) is another good option. It requires a $35 FCC license but has no testing involved. There are also GMRS repeaters you could take advantage of as well. GMRS is becoming more popular for families and neighborhoods focused on disaster prep. Its primary limitation is the dependence on a smaller number of repeaters, and in a major emergency, repeater availability could be uncertain.

Meshtastic, by contrast, is an emerging option using small, low-power LoRa devices to create a digital mesh network. These require no license and can form a very resilient, short-to-medium range communications—depending on where you are, you could possibly achieve the 50-60 mile goal. However, coverage is only as good as the number of nodes nearby, and it's text-only, not voice.

In truth, many people interested in disaster readiness pursue a layered approach: Meshtastic for local and regional alerts, GMRS for local family coordination, and ham radio for broader regional reach and access to organized emergency networks.

Given your goal of maintaining reliable local communication across the 50–60 mile range, a Technician-class ham license would give you the most flexibility, with GMRS as a strong supplemental option.

I encourage you to keep asking questions. The club has folks who are experts in some or all of these technologies and would be happy to discuss your options.

-Mystery Elmer #6

THIS MONTH'S CALENDAR

	June		July, 2025			August	
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27	June	June	1 07:30pm 2 Meter Net 147 ...	2 07:00pm Board meeting	3 06:00pm HF Night at the ...	4	5 10:00am Open House
28	6	7	8 07:00pm VE License Exam ... 07:30pm 2 Meter Net 147 ...	9	10 06:00pm HF Night at the ...	11	12 10:00am Open House 01:00pm General meeting ...
29	13	14	15 07:30pm 2 Meter Net 147 ...	16	17 06:00pm HF Night at the ...	18	19 10:00am Open House
30	20 10:00am POTA Saint Edwa ...	21	22 07:30pm 2 Meter Net 147 ...	23	24 06:00pm HF Night at the ...	25	26 10:00am Open House
31	27	28	29 07:30pm 2 Meter Net 147 ...	30	31 06:00pm HF Night at the ...	August	August

Click map to view on W7DK.org with current active links!

Did You Know??

Ever wonder why July is called July? Well, it used to be called Quintilis, which is just Latin for "fifth"—because back in the day, March was the fifth month of the Roman year. But then Julius Caesar came along, revamped the calendar and had that month renamed in his honor. So yep, July = Julius. He even snuck in an extra day to make sure his month was just as long as any other emperor's. So next time you're sweating through a July heatwave, remember you're soaking up rays in Caesar's month. Not bad for a guy who was stabbed by politicians 23 times.

IN 1966 MARGIE CHAVIS, K7AMJ (SK) put together a wonderful

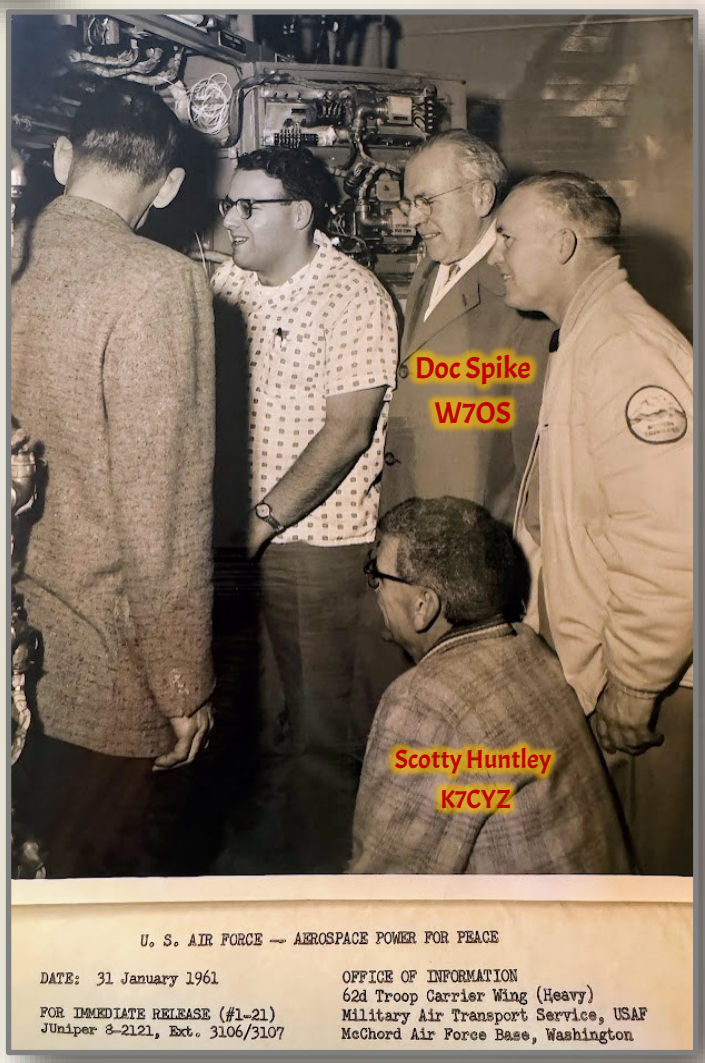
50th Anniversary

scrapbook of W7DK club news clippings, notable events, photos, etc. This monthly column will run for just a few issues, and feature selected items from the scrapbook just for a glimpse into the club's past. Even those readers who are not a member will still find enjoyment in reading about historical ham radio tidbits from more than half a century ago.

–editor

THE U.S. AIR FORCE'S "AEROSPACE POWER FOR PEACE" event held on January 31, 1961, at McChord Air Force Base in Washington State (30 minutes from the Radio Club of Tacoma), was part of a broader initiative to demonstrate the role of aerospace capabilities in promoting global peace and stability during the Cold War era.

During this period, McChord AFB was home to several key units, including the 62nd Troop Carrier Wing, which was recognized for its excellence in airlift operations. (My own mother worked in that division until her retirement in 1995, from the Public Affairs department!).



The involvement of the Radio Club of Tacoma in the "Aerospace Power for Peace" event underscores the collaborative relationship between the military and local civilian organizations. Amateur radio operators, like those from the Radio Club, often played vital roles in providing communications support during public events and emergencies. Their participation would have been integral to the success of the event, ensuring effective communication across various activities and demonstrations.

Given the presence of individuals such as Scotty Huntley and Clifford "Doc" Spike in the photograph above, it's evident that the Radio Club's members were actively engaged in the event's operations. Their expertise in radio communications would have been invaluable, particularly in coordinating between different event segments and managing any unforeseen technical challenges. —*Dave W7UUU*

It's that time again!

W7DK Summer Picnic 2025!

Sunday August 10th 11-3
Fort Steilacoom Park
8714 87th Ave. SW
Lakewood, WA 98498
Shelter #1

Yes indeed! It's that time of year again… the 2025 W7DK Summer Picnic will be held on Sunday August 10th, in the same location we have used for the last few years.

Just enter the main entrance from the North, off Steilacoom Blvd. SW (right across from Western State Hospital). Then turn right into the park on Dresden Ln. SW. Follow the road around and you'll see a large kids play area. You can park there in the large lot, or continue on around on the road, going past the red barns—there's an access road you have to turn right on to get to the rear parking lot behind the picnic grounds.

As always, the Club will provide burgers, hotdogs, and beverages. Please bring a potluck dish of your choice.

As in years past, we will also play a couple rounds of Radio Bingo, or "RINGO" as we call it!

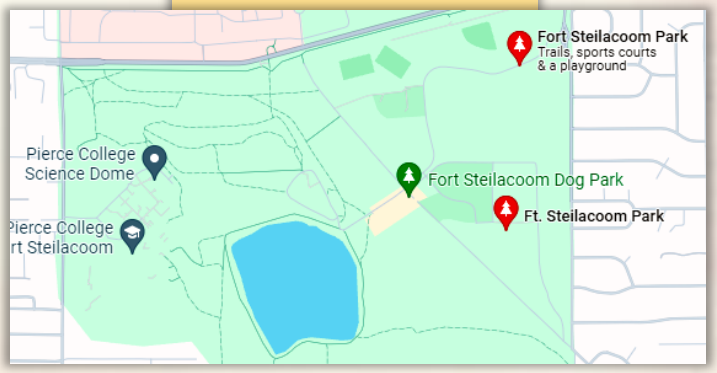
And of course, no alcohol, smoking, or vaping is allowed anywhere inside the park.

Hopefully the weather will favor us this time—the last few years it's been chilly and gray. Maybe this year will be nice like last year! See you there!

■ *-editor*

Picnic Shelter #1

Chef Paul W7PFU


Fort Steilacoom Park
Trails, sports courts & a playground
Pierce College Science Dome
Fort Steilacoom Dog Park
Ft. Steilacoom Park
Pierce College rt Steilacoom

Click either photo or the map for a Google Maps view

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TAKE ME OUT TO THE BALLGAME!

TACOMA RAINIERS THURSDAY JULY 24TH

By Al N7OMS

AH! THE SOUNDS OF SUMMER: THE UMPIRE YELLING "PLAY BALL!", the smack of a ball hitting a mitt, the vendor shouting his spiel. Ah yes—baseball. You just gotta love it.

Here's your chance to hang out with your Radio Club peeps and enjoy an evening of America's pastime right here in Tacoma! Join us on Thursday, July 24th at 7:05 PM as the Rainiers take on the Round Rock Express at Cheney Stadium.

To purchase tickets: follow the link on the Club's webpage. You'll have two options:

- $15.50 gets you a reserved seat in Section D on the third-base side plus a classic ballpark meal.
- $25.50 includes the same seat and meal plus a stylish Tacoma Rainiers cap.

Once you've purchased your tickets, you'll get an email from FEVO Enterprise with a yellow button labeled "Access Tickets Online." Be sure to open it from a smartphone and save that email—just in case.

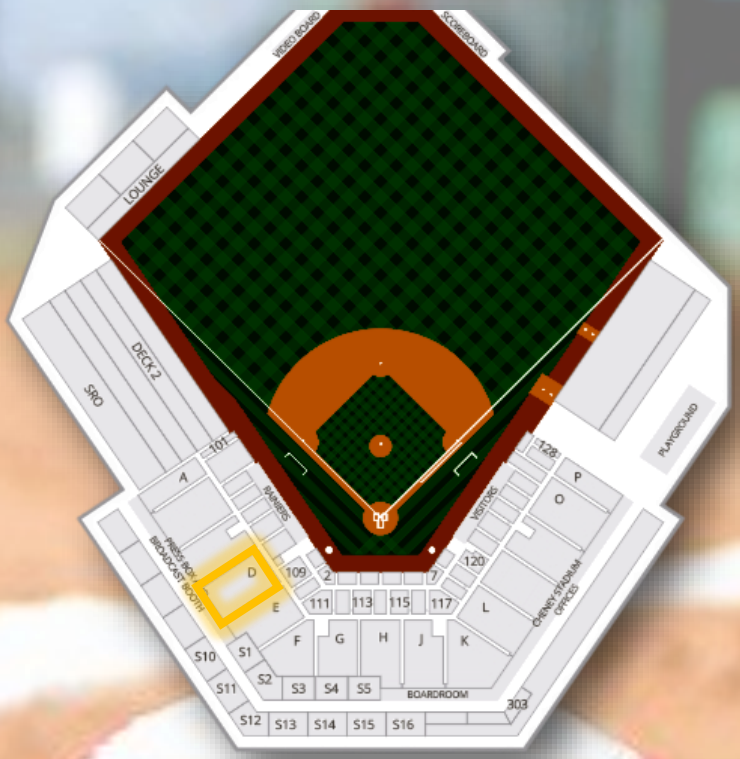
If you already have a Ticketmaster username and password, great—it'll save some time. If not, you'll have the option to create one. Yeah, I know… it's hard to avoid Ticketmaster these days.

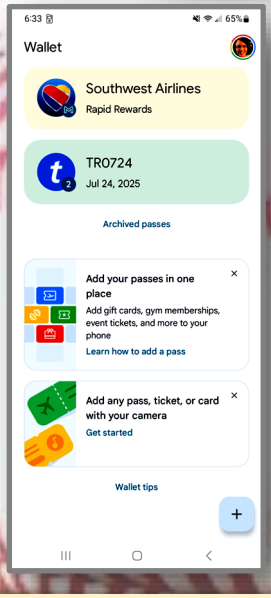
You should now be on the Rainiers' Ticketmaster page. In the upper left corner, tap the three bars to open the menu, then tap "My Tickets", which will load "My Events." Scroll to the bottom and tap "View Event Details." At the bottom of that screen, tap on Section D, Row, and Seat—and eureka, there it is!

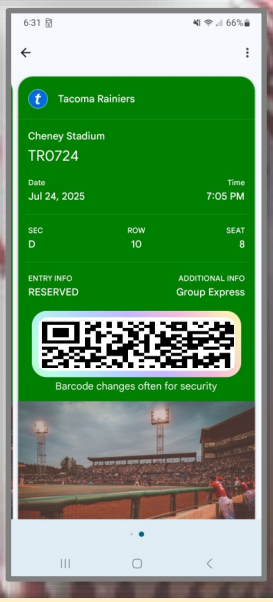
It's best to save the tickets to your phone's Wallet app in case of slow Wi-Fi at the stadium.

Got questions? Contact me:
Email: Al – N7OMS@MSN.COM
Phone: 253-495-9068 (Text me first so I know it's not a spam call.)

73—Al N7OMS




Wallet
Southwest Airlines
Rapid Rewards
TR0724
Jul 24, 2025
Archived passes
Add your passes in one place
Add gift cards, gym memberships, event tickets, and more to your phone
Learn how to add a pass
Add any pass, ticket, or card with your camera
Get started
Wallet tips



Top: Cheney Stadium—RCT is in Section D—click image to go to the Cheney Stadium webpage for address, etc.
Left: The blue circle will indicate your ticket purchase
Right: The QR code for the actual ticket that will display on your phone (Android or Apple)

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AROUND THE CLUBHOUSE

But first.... A little *about* the Clubhouse

THE RADIO CLUB OF TACOMA IS UNIQUE not only in its age (continuously operating since October 1916) but also in its ownership of an actual clubhouse and adjacent parking lot. The current clubhouse was purchased by members in 1957 (the previous clubhouse was purchased in 1927!) and has been maintained on this site ever since. But it takes time, talent, and treasure to keep this dream a reality. Club membership is one of the solid ongoing means with which the club maintains not only members to help with the upkeep, but to also raise the capital that's required to keep our clubhouse in tip-top shape.

If you are not yet a member, please consider joining—even if you're not local! If you enjoy reading The Logger's Bark from afar, you can be a part of our club just as if you were here. And if you are a local, please consider contributing your own skills and effort to keep this club the wonderful thing it is. Ask any officer how you can help. Thanks to all our loyal members! *-Dave W7UUU*

Photos on left from RCT Archives—photos on Right by Dave W7UUU

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AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

Nolan K7GMB hanging out in the kitchen

Walt WA7SDY checks in to the Noontime 40m Net

Nolan K7GBM chats it up with Brad KK7YQC

Chatting it up in the W7OS Museum

Got pictures from the clubhouse? Send 'em in!

All photos this page provided by Dave W7UUU

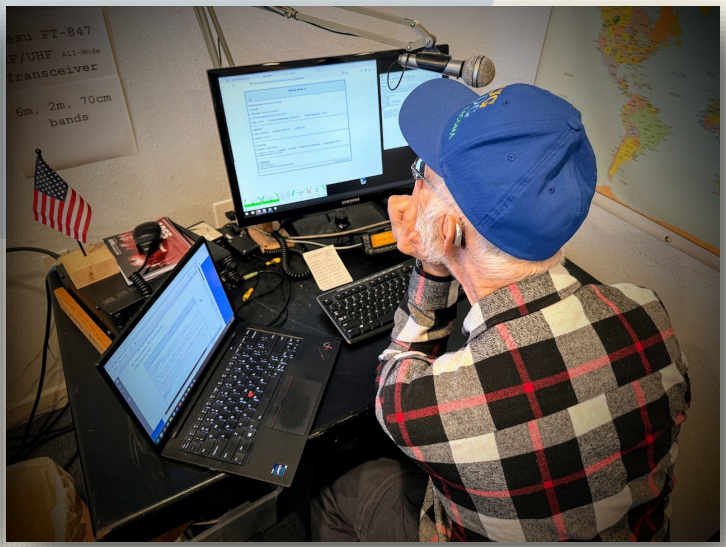
AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

Dave W7UUU presents Nathan WA7BUG and his dad Randy KK7RHR with QRZ-1 Transceivers

Mike W7XH works on Membership Certificates

Phil K7PIA shows off his new zBitx transceiver he picked up at Hamvention in Xenia



Doug AB7DG at the FT-847 in the HF Room

Got pictures from the clubhouse? Send 'em in!

All photos this page provided by Dave W7UUU

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AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

Ellen AI7FP talks tech with Wade W7ITL in the RF Lab

Rodney KM7AEW demonstrates Meshtastic tech

Steve AD7VL shows off a cool collectible coin

Closeup of the coin—1974 Marconi commemoration 100 Lira from Italy

Got pictures from the clubhouse? Send 'em in!

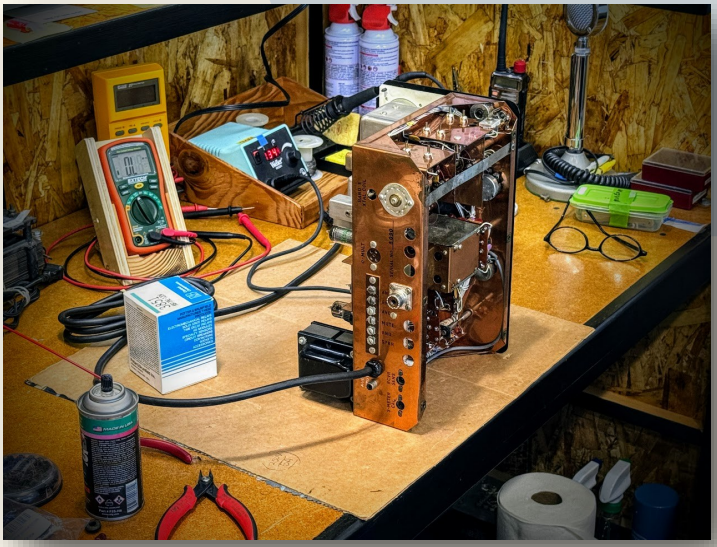
All photos this page provided by Dave W7UUU

AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

Warren NG7G chats with Julie W7JUL in the HF room on a Saturday Open House

Mike W7MKE, Warren NG7G and Mike W7XTZ talk it up out outside the lockup building



Drake 2B receiver under repair in the W7OS Doc Spike Museum

Mike W7XTZ hangs out with Phil K7PIA in the classroom

Got pictures from the clubhouse? Send 'em in!

All photos this page provided by Dave W7UUU

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AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

Dan KD7SV arrives at the clubhouse on a recent Saturday morning

Bob K7MXE chillin' in the Oakman Library

Caught in the stairwell #1
Mike W7MKE

Caught in the stairwell #2
Doug AB7DG

Got pictures from the clubhouse? Send 'em in!

All photos this page provided by Dave W7UUU

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AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

Wade W7ITL works with Jeff W8NGS rigging a circular Yagi for 23cm DATV

Wade W7ITL has the antenna set up on a portable tripod mast mount for testing

"The Gang's All Hear" in the Lou Room on a recent sunny Saturday morning

Walt WA7SDY getting ready to check in to the Noontime Net on a Saturday

Got pictures from the clubhouse? Send 'em in!

All photos this page provided by Dave W7UUU

AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

Phil KC7PS hanging out in the Lou Room

The club's 80--foot tower and antennas against the blue Saturday sky

President Adam W2NCC with Wade W7ITL

Paul W7PFU always with a smile in the clubhouse classroom

Got pictures from the clubhouse? Send 'em in!

All photos this page provided by Dave W7UUU

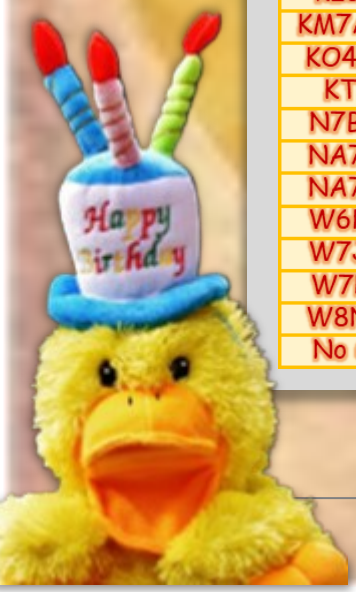
AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

W7DK

July Birthdays!!

Call Sign	Name
AC7K	Doug Lawty
AC7LK	John Robson
K2CCT	John Gentzel
K7BD	Bob Decker
K7DNY	Denny Resop
K7LBD	Paige Butler
K7LBD	Larry Richardson
K7LJN	Lorraine Nelson
K7RRL	Russell Leu
K7TDJ	Tom Jonez
KA7IIV	Dennis Farnes
KG7SV	Marie Fuller
KG7SV	Fred Swift
KH2AY	Gary Emmons
KI7ILQ	Christopher Long
KJ7SJM	John Buonora
KK7EMG	Eric Tenborg
KK7FLZ	Adam Heinricy
KK7IJX	Alexine Adonis
KK7SSL	Robert Schlegel
KK7SSL	Brian Poje
KL0RA	Warren Tilman
KL0TU	Linda Tilman
KM7AQN	Javi Ferrer-Alvarez
KO4LHC	Rachel Jones
KT1A	Greg Sherman
N7BOU	Brian Bourdeau
NA7KM	Bob Mizener
NA7KM	Karl Moore
W6HCE	Holly Eggleston
W7JUL	Julie Cunningham
W7LKG	Rick Leary
W8NGS	Jeff Winget
No Call	Herb Diede



Happy Birthday Jeff W8NGS! Hard at work in the club lockup

Happy Birthday Julie W7JUL! (with Hubby Brad KK7YQC)

photos by Dave W7UUU

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MOST EVERY THURSDAY EVENING from 6PM until 9PM, the Radio Club of Tacoma opens the HF room for one-on-one training time. Saturdays are a great time to come see the clubhouse and socialize, but often it's tough to get "quality time" with the radios. This weekly event is open to all—members and non-members alike. There is always at least one Extra Class operator on hand with a solid knowledge of the Icom and Flex radios in use, as well as the antenna patch bay, amplifiers, and tuners. Even non-licensed "hams to be" can take a hand operating under the tutelage and watchful eye of an experienced "Elmer" on hand to show the ropes. Other nights, the club takes on build-it projects in the classroom—Come on by any Thursday!

■ *-editor*

John K2CCT, a recently renewed RCT member, stopped by to get ideas on how to do FT8 with his older Yaesu FTDX-5000 transceiver
Photo by Mike W7MKE

Mike W7MKE & Julie W7JUL building antennas

Photo by Gary WG7X

Lee KF4EDG (left) & Jeff W8NGS fixing radios in the RF Lab
Photo by Gary WG7X

Open House Reminder!

THIS IS JUST A WELCOMING & REMINDER that the W7DK Radio Club of Tacoma Clubhouse holds an open house on most Saturdays of the year (click HERE for exclusions) from 10:00 AM to 2:00 PM. There's always a nice group of members but ALL visitors interested in amateur radio are welcome to stop by! You do not have to be a member or even a ham to visit us. Please be sure to sign the Visitor's Logbook in the kitchen, say hello to your Clubhouse Host, have a cup of coffee and a donut (always a nice assortment on hand). You may wander the building—visiting the classroom, the downstairs "shack parlor" we call The Lou Room, and of course upstairs to see the main HF room and the W7OS Doc Spike Memorial museum—a living collection of vintage gear that regularly gets on the air.

The last Saturday of every month, we hold a mini flea market where members can sell their ham gear. But even non-members are eligible to dicker for deals and take home gear. And starting around 11:30, our club Chef Paul W7PFU serves up free chilidogs, or sometimes burgers or spaghetti at the chef's whim. We hope to see you stop by soon!

■ *-editor*

Mini-Swap Meet Monthly

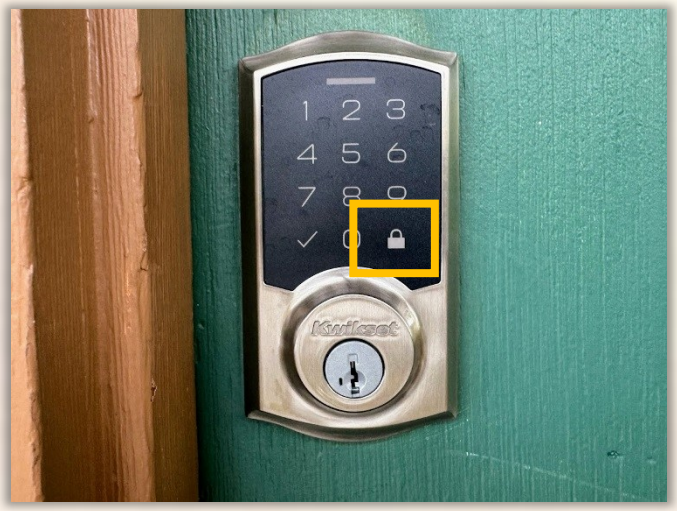
DO YOU HAVE EXCESS GEAR TO SELL? Members of The Radio Club of Tacoma have a little perk every month with our own mini Swapmeet held in the clubhouse on the last Saturday of each month. No charge for a table—just bring your wares and set up shop! Non-members and visitors are free to stop by and see if they can pick up bargains. The club also has gear donated regularly that is made available to visitors and members alike, available for purchase via donation. And of course, as mentioned in the Open House reminder, the club chef Paul W7PFU cooks up chilidogs or spaghetti (whatever suits his mood!) at no charge for guests. ■ *-editor*

How To Lock The Doors

AS WAS REPORTED in last month's Bark by our club Secretary, Gary WG7X, in recent months there have been reports of the clubhouse being found unattended and the doors not even locked! Obviously, this is not acceptable. It's the responsibility of the Club Hosts on Open House Day (Saturday) or those who have door and alarm codes on other days to make certain the building is secure when leaving.

But should you be in the position of being the "last one out", you can still LOCK THE DOOR even if you don't have the code or a key. Simply pull the door closed and push the "lock symbol". The battery-powered mechanism will then lock the door (you won't be able to get back in without the code!). This applies to both the front door and the back door. See photo below—note the "lock" button.

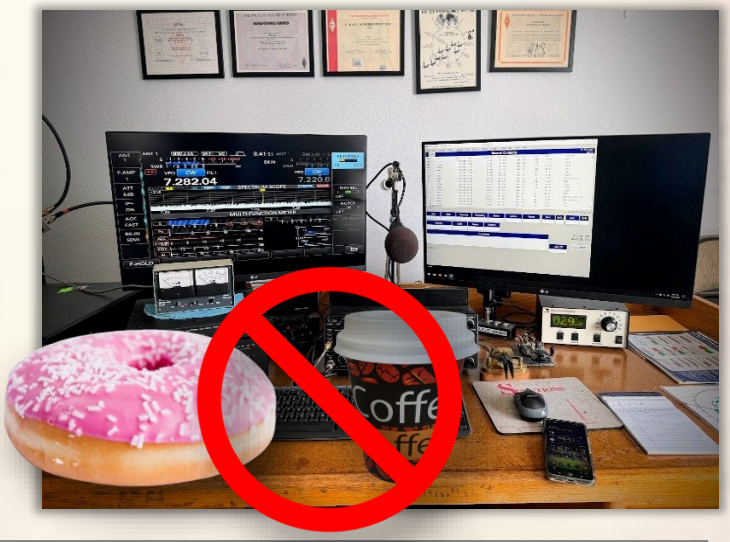
-Dave W7UUU



Help Keep The Clubhouse Clean

THIS IS JUST A GENTLE REMINDER that the W7DK Clubhouse is for all members to use and enjoy, and is a place to put our best foot forward as a club for visitors we welcome in almost every Saturday of the year.

Please be mindful of leaving trash, empty cans or bottles, food wrappers, McDonalds bags, and whatever else. Same holds for coffee cups… we frequently see cups left on classroom tables, the kitchen counters, at the Lou Room table, and wherever else. Please just make sure to "pick up after yourself". Also, remember that liquids and radios don't mix. Please don't take cans or cups of beverages into the HF room or the Museum—just water bottles with lids or closures of some sort. And no "sticky foods" like donuts! No one wants to reach for the tuning knob only to find your sticky donut residue on it!



The craziest DXpedition EVER: BS7H Scarborough Reef 2007

LASHING YOURSELF TO A ROCK FOR THE SAKE OF HAM RADIO: THE SCARBOROUGH REEF DXPEDITION

There's dedication to ham radio, and then there's strapping yourself to a slab of jagged coral in the South China Sea for a week, armed with an Icom, a vertical antenna, and a DX dream (or nightmare, as the case may be!).

The 2007 Scarborough Reef DXpedition (granted the Chinese callsign BS7H) is one of those tales that straddles the line… sometimes a fine line— between high adventure and outright madness. And yet, for DXers around the world, it was a shining beacon—one of the Holy Grails of rare entities. Not because of its tropical beauty (it has none), nor its cultural charm (also absent), but because it was rarely activated, geopolitically sensitive, and frankly, not much more than a few rocks poking out of the ocean at high tide. This DX entity ranks right up there with North Korea (DPRK) in rarity. Common to both in ham history is only four successful DXpeditions to each entity.

Here's the background of this DXpedition and what made it so head-shakingly absurd.

Let's start with the "reef" itself. It's not exactly a beach vacation resort! Scarborough Reef (also known as Huangyan Dao) is located in the South China Sea, about 120 nautical miles west of Luzon in the Philippines. It's claimed by China, Taiwan, and the Philippines, making it one of the real hot-button places where hams really ought not to be hanging around in boats with suspicious-looking antennae and radios that look like they could be used for espionage.

One of the most iconic photos of the BS7H DXpedition. Photo by the BS7H team, actual photographer not noted.

The reef is mostly submerged at high tide, with just a few small rocks (literally named "Rock 1" through "Rock 4") breaking the surface. These rocks became the operating positions for the DXpedition team—each barely big enough for a person, his required

The craziest DXpedition EVER: BS7H Scarborough Reef 2007

radio gear, and a generator.

This was not the first activation of Scarborough Reef, but it was by far the most ambitious. A team of 17 operators from nine countries mounted the BS7H DXpedition in April and May of 2007, with the goal of making as many contacts as humanly (and physically) possible from one of the most logistically insane places on Earth.

Another iconic photo from one of the other rocks
Photo from the BS7H DXpedition team

Getting there is half the insanity. Transportation to the reef was accomplished by boat from mainland China. Due to the geopolitical sensitivities, the team worked closely with Chinese authorities and obtained official permission, which had been almost impossible to get for many years. The team traveled aboard two Chinese vessels, with the main operations vessel named the "Luo Ma Deng," a 97-foot fishing boat converted for sea taxi passenger service for the DXpedition.

Once they reached Scarborough, the real work began. The reef offers no shelter, no solid ground, and certainly no infrastructure like power or fresh water. Everything essential to life and the operation had to be brought in via ship—antennas, radios, generators, tents, food, water, and medical supplies.

To establish operating positions, the team built really shaky-looking wooden platforms atop the rocks. These platforms were anchored to the rocks with ropes and metal pins, and the operators were, at times, literally strapped to the planks to prevent falling into the sea during shifts. It's really hard to imagine trying to "play radio and have fun" under such circumstances… at least for me anyway.

Imagine sitting in a folding chair on a patch of plywood, surrounded by wind-blown salt spray and open ocean, a vertical antenna lashed to the rock next to you, pounding out CW while praying the tide doesn't come in too fast. It must have been like a Field Day from hell for the operators.

Four Rocks, Four Stations:

The team constructed operating platforms on all four major outcroppings (rocks)—aptly dubbed Rock 1 through Rock 4. Each rock had one station, equipped with either an Icom IC-756PROIII or a Yaesu FT-897. Logging was done with laptops using N1MM Logger, which had to be powered by portable gasoline generators kept on nearby floats or perched precariously on the rocks themselves.

The antennas were a mix of verticals and dipoles, chosen for their small footprint and ease of deploy-

The craziest DXpedition EVER: BS7H Scarborough Reef 2007

ment. One rock featured a Hustler 4BTV vertical, another had a homebrew 20-meter monobander. Despite the simplicity of the setups, propagation was fortunately quite decent, and the low noise floor over salt water helped them punch through the pileups.

The four operating positions were staffed in rotating shifts, with operators often working in three to four hour stints, then returning to nearby boats to sleep. No one stayed overnight on the rocks—they weren't big enough, and there was always the risk of injury or drowning. As you might expect, seasickness was a constant issue, as were sunburn, dehydration, and general fatigue. The ocean has a way of reminding hams that it's not especially fond of us. All meals and other needs of course were carried out aboard the adjacent boats.

But despite the absurdity of it all, I can picture myself working CW contacts from this spot as long as the weather remained nice. Photo: BS7H DXpedition

Problems? Oh yes, there were problems. Running four stations strapped to rocks in the middle of the ocean is *no one's* idea of stable infrastructure. One station had to shut down temporarily due to generator issues. Salt corrosion began eating radio and antenna connectors within hours. Waves occasionally broke over the rocks, drenching equipment and operators alike with corrosive salt water. One of the more alarming incidents occurred when a logbook laptop power supply shorted out from corrosion and had to be replaced mid-shift, risking the loss of dozens of rare QSOs. Fortunately, spares were on the adjacent support boats and backups could be made of the data so the logbook on that computer wasn't lost.

Then there were significant and rather scary security concerns. At one point, a Chinese coast guard vessel appeared unannounced and monitored the operation for hours. While the team had all the required permits, there was always the looming concern that someone with more guns might decide otherwise and shut the whole thing down, or worse.

So how many contacts were made and was it worth it in the end? When the radios finally fell silent and the crew headed back to civilization, BS7H had logged an astonishing 45,820 QSOs over an 8-day period, from April 29 to May 6, 2007. Contacts spanned the bands from 160 to 6 meters, with a healthy mix of CW, SSB, and even some RTTY (obviously well before the era of FT8).

Given the operating conditions for the hams running

The craziest DXpedition EVER: BS7H Scarborough Reef 2007

the stations, that number is almost unfathomable. That's nearly *6,000 contacts per day*—roughly 250 per hour, around the clock, for 8 straight days. It was a world-class display of perseverance, coordination, and most definitely a touch of "ham radio masochism".

So, why do this? That's the question non-hams—and many actual hams for that matter—inevitably ask. Why on Earth would anyone go through the trouble, expense, and physical discomfort of operating from a place like Scarborough Reef?

The answer lies in the allure of the rare. For DXers, logging a QSO with BS7H is a badge of honor. Scarborough is one of the most wanted entities on the DXCC list, right up there with North Korea and Bouvet Island. The opportunity to hand out that rare contact is a powerful motivator.

But I think there's more to it than that. There's the spirit of adventure, the camaraderie of the team, the challenge of beating nature—and bureaucracy—to plant your signal where few others ever have. I really get that aspect of such an operation. It's Field Day turned up to eleven, with the stakes, the risk, and the reward all amplified.

The 2007 Scarborough Reef DXpedition remains one of the most extreme operations in amateur radio history. Whether you see it as heroic or slightly deranged, it's hard not to admire the sheer audacity of the thing. Four men at a time on four rocks, lashed to a plywood perch, calling CQ into the wind, sun, and salt spray, while waves crash below and political tensions simmer in the distance…. It's as admirable to me as it is insane all at the same time.

While Scarborough Reef is at the time of this writing still listed as DXCC entity number 506 on the ARRL list, it's fairly doubtful there will be a future activation. At least not of a similar nature as BS7H, with hams strapped to rocks. If a future activation occurs (and I hope it does!), it very possible will be a RIB operation ("Radio in Box", a radio and antenna strapped to the rock, operated remotely). This would simply be for the safety of the team. Only time will tell.

Dave W7UUU

The End Game of it all: The BS7H QSL (or electronic confirmation) - the point of the entire venture. Photo: BS7H DXpedition

THIS MONTH'S FRUGAL HAM COLUMN CONCERNS one of the most entertaining cheap little radios I've played with in a long time. It's called simply by its generic model number, SI4732, and is a mini radio receiver that covers from 500 KHz up to the top of the FM broadcast band at 108 MHz. It's a full-on receiver capable of USB, LSB, AM, and FM. And of course, given that it receives USB and has a BFO, it can also very adequately copy CW (Morse Code) as well.

It contains an 800 mAh rechargeable battery that's charged by any standard USB-C charging cable, with up to 10 hours of playtime. There's even a built-in loudspeaker in the back that plays at a decent level very similar to a cell phone speaker in volume!

Photo by Dave W7UUU

The LCD display is color (to a limited extent), but not a touch screen. Operation is pretty simple—there's a single encoder knob that has a "push to select" function. If you quickly "double-push" the knob, it will pull up either the band coverage menu (which displays actual band segments such as MW1 and MW2 for Medium Wave (BCB), 80m, 40m, 20m, SW1, SW2, etc.). Coverage extends continuously to 108 MHz FM for the FM broadcast band.

The "double-click" function of the selection dial I have to say is frustrating and takes a bit of practice to get right. When you "double click" the knob, you are very quickly presented with options such as Mode, BFO, AGC, VOL, etc. and you only have around one second to decide or spin the dial to other options before again "clicking" the knob to select your option. It's FAST to auto-exit, and can be very frustrating at first.

The receiver comes with a really basic, and frankly, rather useless antenna. The antenna connector is a typical SMA female and can accept any sort of male SMA antenna or adapter to a "real antenna". Antennas of this type are generically called a "Donut Antenna". This receiver comes with one labeled "Donut WB Antenna" and is stamped "10 KHz– 180MHz" but in reality, is pretty much a dummy load. Only strong AM and FM stations can be received.

But as fate would have it, not long after I received this radio, a seller on QRZ.com (Chris WD8EEQ, one of the really reliable regular sellers on the site) offered up an upgrade antenna set at a great price—one for BCB AM and one for Shortwave. Great timing—so I bought them. These upgraded units are actually tuned-circuit antennas, with decent– quality variable capacitors mounted on them. Wow – what a difference these antennas make! Especially the SW version. As I tune the ham bands with this antenna attached, there's a very noticeable "whoosh" of noise as I peak the capacitor to the appropriate band. Rotating the antenna produces very noticeable peaks and nulls. I was very impressed with them.

You can buy the upgraded antennas on eBay or Amazon—and it's well worth the $20 expense vs. the low-performing included antenna that comes with the radio.

When I attached the radio to my SteppIR DB28E Yagi at 70 feet, I was able to copy zillions of stations. However, the receiver as expected tends to overload very easily with a high-performance antenna. And it's a little tricky to use on SSB due to the funky "double click" of the multi-function dial, where you need to select "BFO" in the menu to adjust the tuning for best intelligibility. But it does work, and once you get used to it, it works quite well. Same for CW—which even offers selectivity down to 500 Hz using the "Bandwidth" (or "BW" menu option).

On a whim, I wanted to see if I could reliably decode FT8 signals using the free FT8 app for iPhone called "HotPaw" which not only decodes FT8 but can also send it if you put the iPhone speaker close to your mic on an SSB rig.

I was happy see decodes start flowing just from placing the phone near the rear of the receiver, set to 14.074.

Note that I was only using the Donut SW antenna and the receiver was sitting on the kitchen table. But signals were steadily heard and pouring in and the app decoded them without fail! See below for the receiver set to 20m FT8 and the HotPaw software screen capture.

This is a fun little receiver I must say. Is it serious for ham use? No, not really—but it's really fun to tune the bands to find signals using such a basic antenna. WWV came in on all three major frequencies (5, 10, and 15 MHz) right from my living room. Fun little gizmo and well worth the price ($60 including the better antennas).

-Dave W7UUU

Photos by Dave W7UUU

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STRAY TOPICS OF INTEREST:

Audio from the 2002 DPRK DXpedition

IN THE MAY ISSUE OF THE LOGGER'S BARK, I ran an article that laid out the histories and outcomes of the four officially-recognized DXpedition-style events that took place in the Hermit Kingdom, the DPRK or North Korea.

A *Bark* reader, Bill K2WH, who found the magazine on QRZ, reached out to me and sent me an audio file that he recorded on September 26, 2002 of Ed P5/4L4FN operating 20m SSB. There are scant few (if any) such recordings out there, so this is a pretty cool find.

I asked Bill if he wouldn't mind if I converted it into a video so that it could be linked in an upcoming Logger's Bark issue—so here it is! It's amazing how strong the signal was for Bill in 2-land, who was listening to the 20-meter transmission on his 160-meter dipole at the time.

To hear the file, simply click on the image below (or better still, right-click then "open in new tab" so you won't be taken out of The Bark).

Of course, you will only hear Ed P5/4L4FN and not the calling station (other than the lids who aren't operating split). He was listening some 10 to 20 KHz "up" so the calling stations had room to spread out. Although I do believe he worked one station simplex in the recording, which is pretty unusual!

Big thanks to Bill K2WH for sharing this.

-Dave W7UUU

SHERLOCK

THE 30 YEAR TRANSMITTER HUNT MYSTERY

By Dave W7UUU

INTRODUCTION: THE FOLLOWING ARTICLE WAS SUBMITTED ANONYMOUSLY WITH ONLY THE PSEUDONYM OF SHERLOCK GIVEN . I'VE EMAILED WITH THE AUTHOR, CONFIRMED HE IS A LICENSED HAM (I'M SWORN TO SECRECY AS TO HIS CALL SIGN AND NAME). I'VE ALSO CONFIRMED IT IS NOT AI GENERATED IN ANY WAY. IN FACT, IT NEEDED QUITE A BIT OF POLISHING TO REACH THIS FINAL FORM. IT'S A FASCINATING TALE, AND ALL TRUE.

THIS REALLY HAPPENED.

SHERLOCK

THE 30 YEAR TRANSMITTER HUNT MYSTERY

By Dave W7UUU

THE 30 YEAR TRANSMITTER HUNT MYSTERY

It all began in 1987, somewhere on a VHF simplex frequency in the United States. The transmissions were unmistakable—music, always music—and always from a mobile source. What set this case apart, though, was the sheer duration. For nearly three decades, the mysterious operator kept resurfacing, a phantom of the airwaves.

But the music, catchy as it might have been to some, wasn't harmless. It was a clear violation of **US FCC regulations 47 CFR Part 97.113 (d) and (e)**. Over the years, dedicated hunters recorded the illicit broadcasts, documenting every suspicious transmission. But the search proved elusive. Even advanced techniques like direct surveillance and the then-novel method of "Transmitter Fingerprinting" brought no resolution. The first successful fingerprinting attempt dated all the way back to September 1986, using a method later described in *CQ Magazine*, May 2017, page 32.

"There is nothing more stimulating than a case where everything goes against you."
— *Hound of the Baskervilles*

He came to be known among the hunters as the "Music Man"—a rogue operator who relayed unwanted tunes from his car's FM radio straight onto the ham bands. For years, his appearances were infrequent, almost ghostlike. But in 2015, something changed. His broadcasts increased in frequency, and the community of hunters expanded.

One day, during a routine broadcast, a sudden interruption occurred—an expletive burst forth, clearly from a man's voice. The hunters had been lucky: they'd caught his voice on tape.

"Never trust to general impressions, my boy, but concentrate yourself upon details."
— *A Case of Identity*

All photos by Author

With renewed focus, the investigation picked up momentum. They noted that his transmissions always came from the northern part of the city—and always while in motion. There was never a broadcast from a stop sign, red light, or parked car. The signal flutter, typical of Doppler shift, confirmed speeds over 40 mph. He was almost certainly on the freeway.

SHERLOCK

THE 30 YEAR TRANSMITTER HUNT MYSTERY

By Dave W7UUU

Plotting his bearings, they established a routine: north to the city center and often back again. His daytime transmissions followed no schedule, suggesting he didn't keep a standard 9-to-5 job. Patterns began to emerge as his operating days and times were logged meticulously on a calendar.

Once, the signal's flutter slowed, but stayed constant. Traffic cams revealed that the northbound freeway was congested. From this, the hunters deduced that the Music Man was stuck in traffic—heading north, going home. The traffic counter that day showed over 2,000 vehicles per hour.

His signal was no low-power setup. He was heard from 50 miles away, indicating he was likely using a minimum 30-watt transmitter paired with an external antenna. Multiple secret observation sites were established along his route, monitoring freeway traffic and scanning vehicles. One day, even though no transmission was taking place, a car was spotted that matched the pattern—a lone vehicle with a VHF whip antenna, one of the very few still seen on modern cars. Only about 1% of newer vehicles carry such whips, making his ride stand out.

Photographs were taken. Suspect vehicles were logged. Simultaneously, a list of other hams who were active during Music Man's transmissions was compiled. These individuals were cleared as "approved" T-hunters. This cross-reference gave investigators confidence: they knew who it *wasn't*.

Sometimes, the Music Man's signal would drift north and vanish; other times, it veered west. It was clear—he occasionally left the city entirely.

Then came the final day.

The signal appeared again, tracing its usual southbound path along the freeway. But this time, it kept going—farther than ever before. After half an hour, the music faded. The terrain to the southwest was sparse—few roads, and fewer still that led to any populated area. The music stopped entirely.

There, tucked in the canyon beyond the city limits, was an access road leading to a locked, secure, private location—and only a few cabins scattered across the area. One hour later, a new transmission appeared from that very direction—on a completely different frequency. This ham operator gave his call sign.

The hunters had anticipated this possibility. They had been scanning all the logical ham frequencies, suspecting that the Music Man never jammed on the same frequency he used for legitimate communication. And there it was—a valid call sign, transmitted from the same remote area.
The operator was Extra Class.

Roughly an hour later, the Music Man resumed his antics—from the exact same weak location. The music began quietly, then strengthened as the signal traced a path back through the city center and north along the freeway—exactly as it had on other days.

SHERLOCK

THE 30 YEAR TRANSMITTER HUNT MYSTERY

By Dave W7UUU

That was the breakthrough.

Thanks to QRZ.com, they now had a way to link a call sign to a ZIP code. A quick lookup placed the operator's residence in the northeast section of the city. Google Street View showed the property—and there, in the driveway, was the car seen during the freeway stakeouts. The telltale VHF whip antenna was clearly visible at the rear of the car's roof.

They had him.

The final step: share the evidence with the authorities. With luck, the Music Man would finally vanish from the ham bands for good.

"I am not the law, but I represent justice so far as my feeble powers go."
— *The Adventure of the Three Gables*

This story comes from the notes of Sherlock. Certain technical details—such as the use of **AN/PRD-12** gear and physical interdiction tactics—have been redacted to prevent future Music Men from learning how to evade detection.

"I should prefer that you do not mention my name at all in connection with this case, as I choose to be only associated with those crimes which present some difficulty in their solution."
— *The Adventure of the Cardboard Box*

The identity of the city, and of Sherlock himself, must remain confidential. This was a real event. And some Music Men? *They are armed.*

Epilogue:

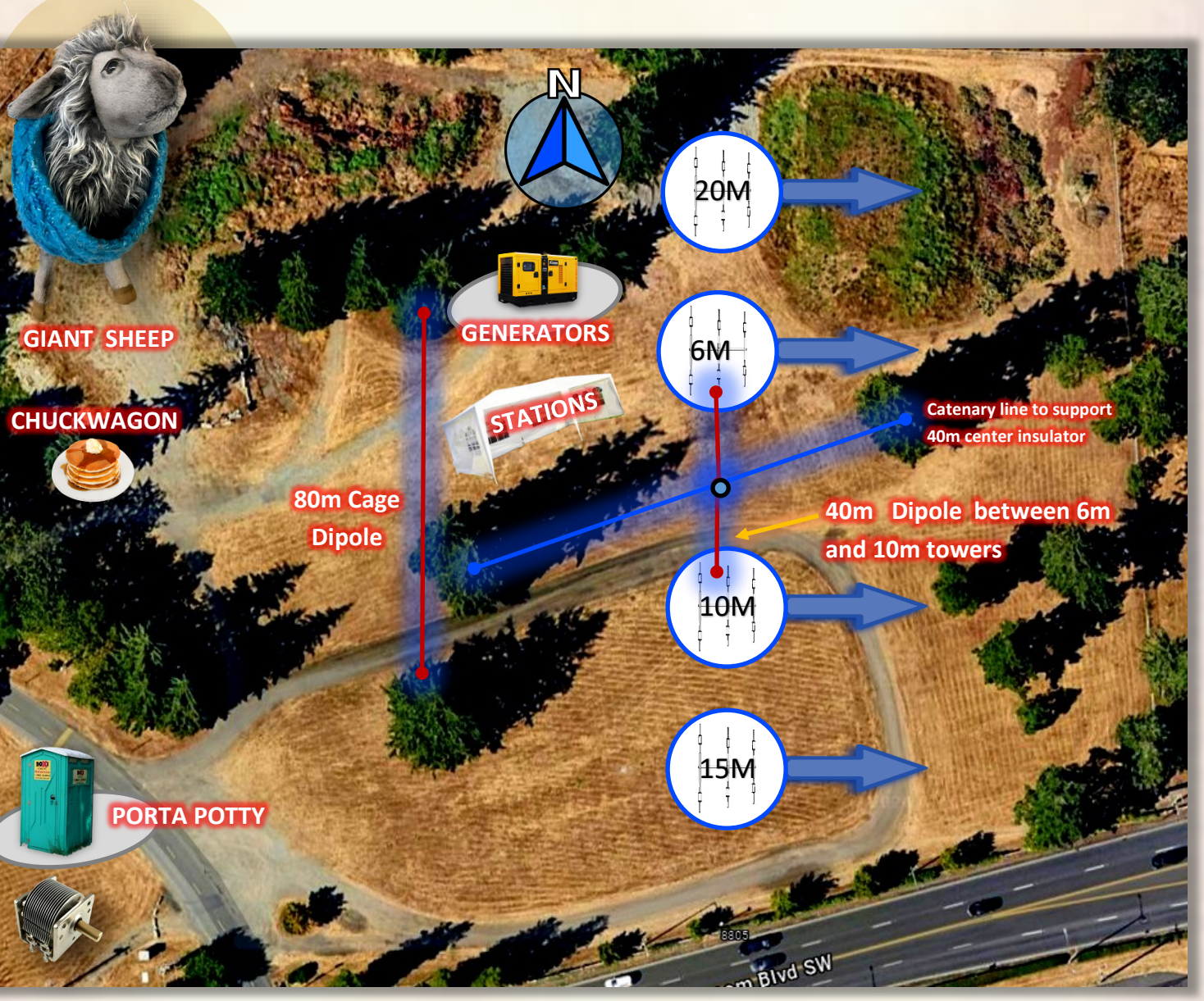
In the aftermath, it was discovered that the Music Man had been **transmitting his location *all along*—via APRS**. His track was stored in the **APRS database**, which retains data for up to two years.

Sherlock is still watching.
The game is afoot.

-Sherlock [Real name and call sign withheld]

W7DK FIELD DAY 2025

THE DETAILS YOU NEED



Radio Club of Tacoma W7DK 2025 Field Day Antenna Plan

Cast & Crew

STATION MASTERS:

80/15	Dan KD7SV
40M	Al N7OMS
20M	Mike W7XTZ
10M	Gary WG7X
6M	Multiple Operators

ROCKET LAUNCHER CREW:
Dan KD7SV
Jeff W8NGS
David W7GEL
Joe KB7ZYB
Leonard KA7NWF
Diane W7SIM
Kerry KI7LTV

SAFETY OFFICER:
Doug AB7DG

LOGGING/NETWORKING:
Randy WB4SPB

PUBLICITY/PROMOTION:
Becky KG7FZH
Sam N9MII

KITCHEN:
Paul Matney WB7PFU
Red WB7EC

ANTENNA ASSEMBLY:
Al N7OMS
Gary WG7X
Julie W7JUL

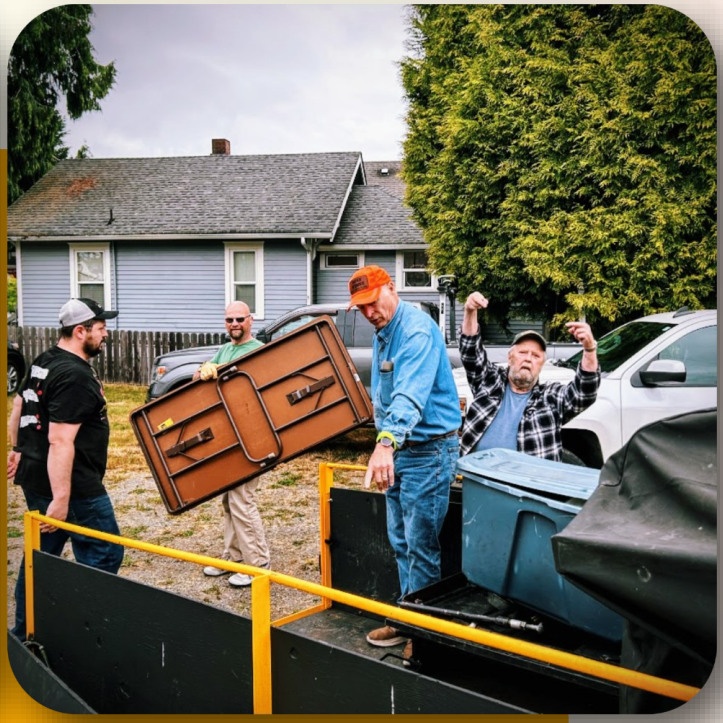
TENT SETUP:
Doug K7FDR, Lead
Many others “on deck”

TRANSPORTATION:
Mike W7MKE
Mike W7XTZ
Doug K7FDR
Joe KB7ZYB
Joe KB7ZYB
Brad KK7YQC
Paul W7PFU

WESTERN STATE HOSPITAL—LAKEWOOD, WA

W7DK FIELD DAY 2025

THE PHOTOS!



FRIDAY LOAD-OUT DAY!

All photos this page provided by Al N7OMS

W7DK FIELD DAY 2025

THE PHOTOS!

FRIDAY SITE SETUP!

All photos this page provided by Gary WG7X

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W7DK FIELD DAY 2025

THE PHOTOS!

FRIDAY SITE SETUP!

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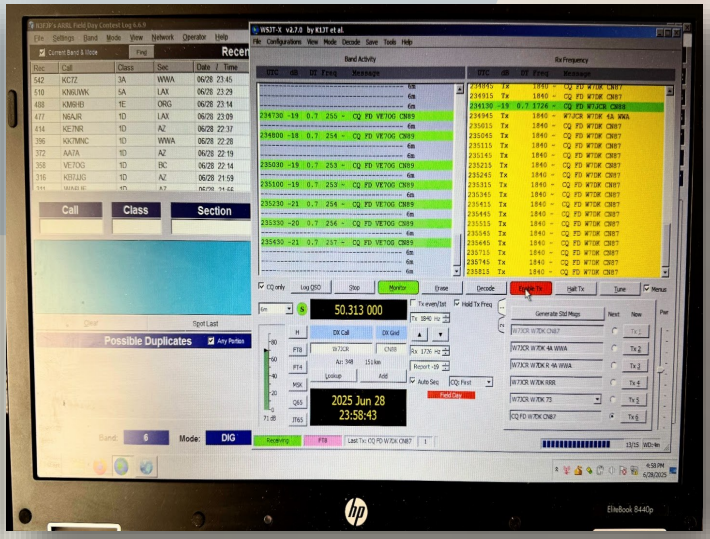
W7DK FIELD DAY 2025

THE PHOTOS!

Erick K7APO, with wife Ginger, & friend Linda

6-meter Yagi at 40 feet against a summer sky!

Jordan W3NTA (left) and Gary WG7X at the 10m SSB station



We had one small 6m opening which netted some FT8 contacts as far as California

All photos this page provided by Dave W7UUU

MIGHTY DK ON THE AIR!

W7DK FIELD DAY 2025

THE PHOTOS!

Julie W7JUL operating the 10m SSB station

Jordan W3NTA

John K2CCT (L) with Gary WG7X

Closeup of Gary WG7X's homebrew footswitch—a doorbell button with a thick Lucite panel to provide a wide activation zone and no slipping!

MIGHTY DK ON THE AIR!

All photos this page provided by John N7TES

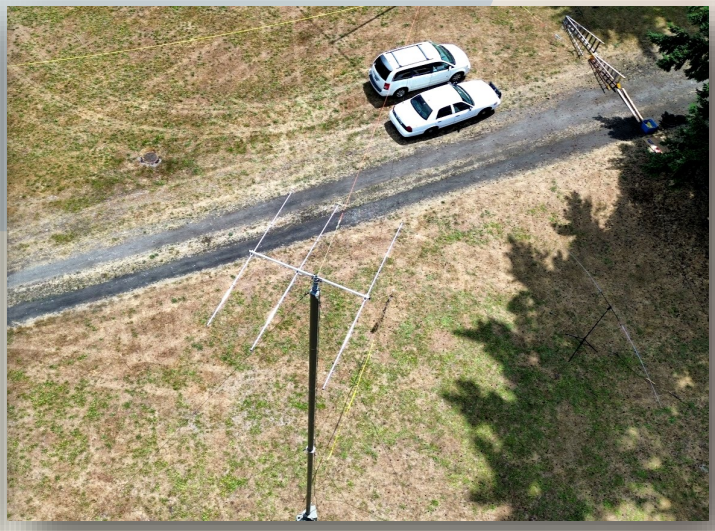
W7DK FIELD DAY 2025

THE PHOTOS!

Aerial view—center of 80m cage dipole

Aerial view—20m Yagi

Aerial view—Operating tent



Aerial view—6m Yagi

MIGHTY DK FROM THE AIR!

All photos this page provided by Max KK7HAY

W7DK FIELD DAY 2025
THE PHOTOS!

At dinner, Doug AB7DG & wife Sandy came back to the site for dinner before Square Dancing night!

Stephen AD7AB & Luna
Photo by Leonard KA7NWF

Bob AD7VL hanging out in the Chuckwagon

Mike K7WM stopped by to visit the club

MIGHTY DK ON THE AIR!

All photos this page provided by Dave W7UUU except as noted

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W7DK FIELD DAY 2025

THE PHOTOS!

40m Band Captain Al N7OMS

10-meter Band Captain Gary WG7X

John K2CCT listening on 10

Chuckwagon crew Red WB7EC and Paul W7PFU

All photos this page provided by Dave W7UUU

MIGHTY DK ON THE AIR!

RETURN TO HOME PAGE

W7DK FIELD DAY 2025

THE PHOTOS!

Stephen AD7AB and Luna

Luna was ready for her closeup—what a cutie!

Dan KD7SV operating the 15m station

Mike W7MKE operating the 10m station

All photos this page provided by Dave W7UUU

MIGHTY DK ON THE AIR!

W7DK FIELD DAY 2025

THE PHOTOS!

Max KK7HAY with Stephen AD7AB

Kevin W7QKR at the 6-meter station

Taking a break!

Mystery CW operator at the 20m CW station

MIGHTY DK ON THE AIR!

All photos this page provided by Dave W7UUU

W7DK FIELD DAY 2025

THE PHOTOS!

20m Band Captain Mike W7XTZ

President Adam W2NCC

Bruce WB7TVS and Stephen AD7AB

Stephen AD7AB

MIGHTY DK ON THE AIR!

All photos this page provided by Dave W7UUU

W7DK FIELD DAY 2025

THE PHOTOS!

W7DK is fortunate to own four AB577 “Rocket Launcher” portable towers. This is the first year that all four have been deployed for Field day. From right to left: 5-element 15m, 4-element 10m, 3-element 6m, and barely visible far left, 3-elements on 20m

Photo:
Dave W7UUU

MIGHTY DK ON THE AIR!

W7DK FIELD DAY 2025

THE PHOTOS!

MIGHTY DK ON THE AIR!

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Al N7OMS

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W7DK FIELD DAY 2025

THE PHOTOS!

Arial views of the operating tent area—Photos by Max KK7HAY

W7DK FIELD DAY 2025

THE PHOTOS!

Jeff W8NGS operates 10m SSB as Phil KC7PS looks on

Al N7OMS working 40m FT8 on the Flex

Doug AB7DG hard at it sending Winlink messages

Doug AB7DG explaining the ins and outs of the Winlink system with Rik N7RIK

MIGHTY DK ON THE AIR!

All photos this page provided by Dave W7UUU

W7DK FIELD DAY 2025

THE PHOTOS!

Wade W7ITL shows off his 1296 circular Yagi hoping to hit the DATV repeater

The Power Company

40m NVIS antenna was tried but due to harsh local noise was useless...

...so Bob AD7LJ and Jeff W8NGS break it down as Leonard KA7NWF looks on

All photos this page provided by Dave W7UUU

MIGHTY DK ON THE AIR!

W7DK FIELD DAY 2025

THE PHOTOS!

Looking into the operating tent from the Winlink station operated by Doug AB7DG

Al N7OMS (L) with David

Dan KD7SV working the 15m station

10m Band Captain Gary WG7X

MIGHTY DK ON THE AIR!

All photos this page provided by Dave W7UUU

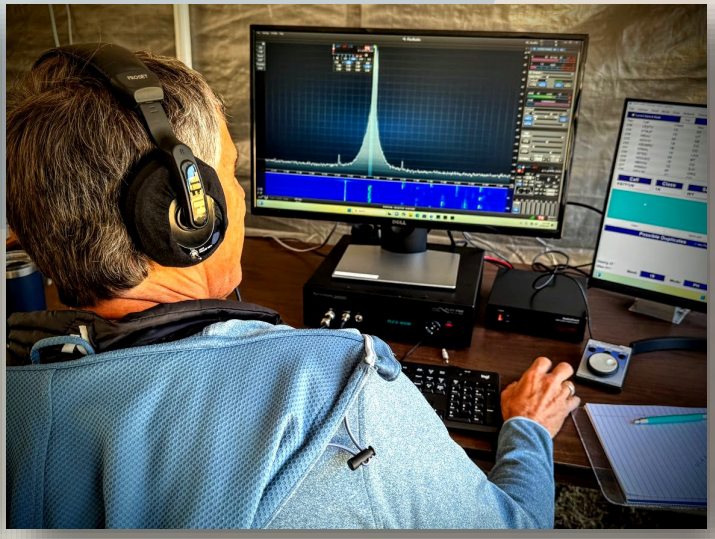
W7DK FIELD DAY 2025

THE PHOTOS!

Bob AD7LJ at the 40m station with Laura KK7NKL

Max KK7HAY and his completely homebrew high-speed POV drone

Laura KK7NKL back on 40m this time with Al N7OMS



Dan KD7SV operating 15m SSB on the other Flex

FINAL STATS WILL BE IN THE AUGUST ISSUE OF THE BARK!

All photos this page provided by Dave W7UUU

W7DK FIELD DAY 2025

HOW WE DID—THE SCORE!

FIELD DAY 2025 is now in the history books! And this year turned out to be a pretty good one for the club!

In all we had 27 operators.

W7DK worked all U.S. ARRL sections, 9 Canadian sections (missed 5), and 5 DX multipliers: Australia, Chile, France, Japan, & Mexico. Our total QSO count (preliminary) was 1094. By mode, we had 209 CW, 564 Phone, and 321 Digital. We got lucky with a small 6m opening to the South and worked stations in California which was great. Thanks to all the operators, Band Captains, road crew, the Chuckwagon staff, and all who turned out in support for another great Field Day for The Mighty DK!

-Dave W7UUU

QSOs by Band	
Band	QSO Count
80	80
40	269
20	302
15	283
10	128
6	32
Total:	1094

QSOs by Mode	
CW	209
Phone	564
Digital	321

Multipliers
All US sections
9 Canadian Sections
5DX:
Australia
Chile
France
Japan
Mexico

Number of Operators: 27	
AC7KP	AD7LJ
AI7FP	K2CCT
KA7NWF	KB7TNT
KD7SV	KG7ZYB
KI7ILQ	KK7HAY
KK7NKL	KK7YQC
KO7T	N7RIK
N7TES	NG7G
N2NCC	W3NTA
W7GEL	W7ITL
W7MKE	W7QKR
W7XTZ	W8NGS
WB4SPB	WG7X
W7JUL	

Background photo Dave W7UUU

About the AB-577 Portable Tower

By Dave W7UUU

THE RADIO CLUB OF TACOMA NOW OWNS four of these amazing and versatile portable tower systems. Officially called the AB-577, it's a piece of Vietnam-era radio hardware often referred to as a "Rocket Launcher" simply based on how it looks in the original training manuals and when seen in person.

The AB-577 "Rocket Launcher" tower system, originally developed for military communications, has found a second life in the ham radio community, particularly during Field Day events. Its portability, relative ease of assembly, and robust design make it an ideal solution for temporary antenna setups.

Illustration from the original manual for the AB-577

The AB-577 was designed by the U.S. Army in the 1960s to support field-deployable antennas without the need for permanent infrastructure. The system comprises eight 5-foot aluminum tubes, which can be assembled to form a 40-foot mast. With the addition of the MK-806 extension kit, the height can be extended to 75 feet. The mast is stabilized using guy wires and can be erected without a prepared surface or foundation, making it suitable for pretty much any sort of terrain that can be penetrated with stakes for the guy wire supports.

For many years, amateur radio operators have embraced the AB-577 for Field Day events to bring some "tower action" to the site for sporting directional antennas like Yagis, as well as end supports for wire antennas. Because of this, the AB-577 allows for very versatile operation across multiple bands.

The RCT has been using Rocket Launchers on Field Day for many years, and we now have a stable of four serviceable systems.

One of the biggest benefits is the system's quick assembly time, often completing setup in about an hour with a small team (3 to 5 sturdy hams to work the system). The AB-577's design makes it easy to experiment with different antenna types and configurations and helps to enhance any club's options and operations for Field day.

While no longer in production, the AB-577 remains available through military surplus channels and amateur radio classifieds. In fact, it's not uncommon to see systems for sale on Craig's List.

Prices vary based on condition and completeness, with listings ranging from $550 for partial sets (think "junkers"!) to $2,900 for complete systems, with all

About the AB-577 Portable Tower

By Dave W7UUU

parts and pieces present and accounted for.

There are LOTS of safety concerns with one of these towers however. Erecting the AB-577 requires attention to safety due to its size and the tension involved in guying the mast. Proper training and adherence to guidelines are essential to prevent accidents. The RCT requires an annual training class (the last two years held at your Editor's property out in Burley) where the Field Day Rocket Launcher team is taught the process by experienced users.

Resources like the AB-577 Operator's Manual (TM 11-5820-538-12) provide detailed instructions for safe assembly and operation. But nothing beats having a skilled, experienced team leader on hand to teach new operators how to safely deploy one of these systems.

The club's AB-577 "Rocket Launcher" tower systems continue to serve the club as a reliable and really versatile solution for temporary antenna deployment during our Field Day events. Its military-grade construction, ease of assembly, and adaptability make it a very cool asset for Field Day operations for us.

-Dave W7UUU

Above: *Unloading the AB-577 tower system… called the rocket launcher simply due to the appearance of how the 5-foot tower tubes store in the frame*
Below: *W7DK tower crew trains for installation come Field Day—Photos W7UUU*

President Adam W2NCC starts the meeting—Mike W7MKE filling in as Secretary in the absence of Gary WG7X

The program begins—W7UUU "Living History" video of member Nick Winter K7MO who sadly passed away before it was completed

John AC7WW receives an award for his many years of service to the RCT in many capacities, most notably his service as a VE Presented by President Adam W2NCC

All photos this page provided by Dave W7UUU

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Jeff W8NGS chops into his piping hot pretzel!

Bob K7MXE with David AC7KP at the meeting

John N7TES

Doug AB7DG presents to the meeting

All photos this page provided by
Dave W7UUU

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email loggersbark@gmail.com

Raffle Manager Leonard KA7NWF welcomes in member Walt WA7SDY to the meeting

Sharp eyes will notice the "Field Day Pig" on the table at the left—a tradition brought back to solicit donations for FD

Nathan WA7BUG and his dad KK7RHR

Paul W7PFU shows off his prize from the raffle drawing

All photos this page provided by Dave W7UUU

STRAY TOPICS OF INTEREST:

The Saga of the C&G Sign!

LAYNE KK7SWV–THE NEW CUSTODIAN OF THE STREET CORNER SIGN FOR C&G RADIO SUPPLY COMPANY

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editor.taggersbark@gmail.com

STRAY TOPICS OF INTEREST:

The Saga of the C&G Sign!

OLD-TIME HAMS IN THE GREATER PUGET SOUND

will surely remember the name *C&G Electronics* — originally known as C&G Radio Supply Co. Founded in 1944, C&G quickly became a cornerstone of the amateur radio and electronics supply scene in the Pacific Northwest. Initially established as a wholesale operation, C&G expanded into retail by the 1950s. Its showroom featured all the legendary brands of ham radio's golden era: Collins, Hammarlund, Drake, Hallicrafters — all proudly on display.

Through the 1960s and into the 1970s, the ham radio department was run by long-time Radio Club of Tacoma (RCT) member and club president Dennis Reanier, W7UBA. In the early '60s, another RCT member, Steve Dightman, AF7YD, worked there as a ham gear salesman. The company was taken over around 1964 by the Norberg family but kept the ham radio department intact. (Ross Norberg ran C&G until it finally closed in November 2011).

By the mid-1970s, yet another club member, Cliff Osborne, W7MFG, had become a manager of the business, working alongside Ross Norberg. Though amateur radio remained part of the business' identity, the company's primary revenue shifted more and more into commercial electronics sales and distributing Muzak background music to businesses around Tacoma — piped in over leased telephone lines.

In January of this year, the club received an email from Art Cutting, the son of C&G co-founder H. Everett Cutting W7HC — the "C" in the company's name. Everett was a very early radio pioneer, originally licensed as 7HC in 1914. He was RCT member number 197, having joined in July 1929. Art himself (who never became a ham), retired in 2022 after 29 years teaching clinical biomedical engineering at Bates Technical College. Before his retirement, he was gifted the original corner sign from the C&G Electronics building at 25th and Jefferson in downtown Tacoma. Art reached out, hoping to find a new home for this unique piece of local radio history.

After several months of searching, the club was contacted by Layne, KK7SWV — whose grandfather, as it turns out, worked at C&G during the same era as Steve Dightman. And just like that, the sign found its way back to someone with a personal connection to the store.

Thanks to Art Cutting for preserving this great piece of history — and to Layne for giving it a good home.

-Dave W7UUU

Art Cutting on the left, turning the C&G sign over to its new custodian, Layne KK7SWV of Graham, WA

Steve Dightman AF7YD, hired by C. Everett Cutting, at work in the ham sales area at C&G in October 1965

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RCT Bulletin Board

Posted notes and other important stuff

Here's a **useful tip** when reading the Bark: if you want to view a link, "right click" > "Open link in new window"… that way you won't lose your place in the Bark!

Stick it on your calendar NOW! W7DK picnic location is now booked—Shelter #1 at Fort Steilacoom (same as years past) 8717 87th Avenue SW in Lakewood

Date is SUNDAY AUGUST 10th 11 to 3

Last month's Hidden Object: Variable Capacitor
Hidden on page 42 lower left of the Field Day map

Last Month's Hidden Word:
Variable Capacitor
It was hidden on page 60, lower right of he yellow box

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WA7BNM CONTEST CALENDAR

Contest events for the coming month

HUGE THANKS TO Mr. Bruce Horn, WA7BNM for publishing his "Contest Calendar" for all these many years… a truly wonderful resource for finding virtually every ham radio contest on Earth that might be happening, in most any mode and most any region in the world. Follow the link to take you to the site, then sort through the various options to find the specifics of every upcoming event. For now, here's the WA7BNM Contest Calendar for the this month. Click the calendar below to visit Bruce's site directly.

July 2025	
RAC Canada Day Contest	0000Z-2359Z, Jul 1
Venezuelan Ind. Day Contest	0000Z-2359Z, Jul 5
NZART Memorial Contest	0800Z, Jul 5 to 1100Z, Jul 6
TA VHF/UHF Contest	1200Z, Jul 5 to 1200Z, Jul 6
Marconi Memorial HF Contest	1400Z, Jul 5 to 1400Z, Jul 6
PODXS 070 Club 40m Firecracker Sprint	2000Z, Jul 5 to 2000Z, Jul 6
ARS Spartan Sprint	0000Z-0200Z, Jul 8
SKCC Weekend Sprintathon	1200Z, Jul 12 to 2359Z, Jul 13
IARU HF World Championship	1200Z, Jul 12 to 1200Z, Jul 13
QRP ARCI Summer Homebrew Sprint	2000Z-2300Z, Jul 13
4 States QRP Group Second Sunday Sprint	0000Z-0200Z, Jul 14
NTC QSO Party	1900Z-2000Z, Jul 17
LABRE DX Contest	0000Z, Jul 19 to 2359Z, Jul 20
Trans-Tasman Low-Bands Challenge	0800Z-1400Z, Jul 19
IARU Region 1 70 MHz Contest	1400Z, Jul 19 to 1400Z, Jul 20
North American QSO Party, RTTY	1800Z, Jul 19 to 0559Z, Jul 20
Run for the Bacon QRP Contest	2300Z, Jul 20 to 0100Z, Jul 21
SKCC Sprint	0000Z-0200Z, Jul 23
ARAM 50 MHz Contest	1200Z, Jul 26 to 1200Z, Jul 27
RSGB IOTA Contest	1200Z, Jul 26 to 1200Z, Jul 27
ARS Flight of the Bumblebees	1700Z-2100Z, Jul 27

Click Calendar to visit online

WA7BNM Contest Calendar data used with permission

Background Image Source LINK

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THE W7DK ELMER BOARD

Do you have a skill or tool to help new hams?

YOU! YES *YOU!* Do YOU have a skill you could pass on to new amateur radio operators? Do you possess a skill or piece of gear that you're willing to share with others to fix antenna problems, diagnose noise issues, drive a ground rod, teach Morse, help teach technical topics? If the answer is YES you too could be a W7DK Elmer!! Let any officer know what your skills are or how you could help new hams get a leg up on the hobby. And if you're one of those already on the list, are there any changes we should be aware of? If so please hit the email address (found bottom of page on the right) and let us know so we can update the W7DK Radio Club of Tacoma "Elmer Board".

NEW HAMS OR MEMBERS: If you are looking for help, and NEED AN ELMER to help guide your way, use this table! Find the skill you need on the left, then look for an Elmer Provider of that skill on the right and reach out to them. ALL of these Elmer's have committed to helping so please don't hesitate.

ELMER ("MENTOR") BOARD

Do you need help with some area of ham radio?

List of members' areas of interest:

1. Technical questions, Classes
2. Help with Morse Code
3. License Examinations
4. Antenna and Station Planning
5. Antenna and Tower Erection
6. Buying Equipment (new or used)
7. Equipment Repair
8. Understanding and Using Your Gear
9. DXing and Contests
10. Club and ARRL Activities
11. Using Test Equipment
12. IRLP, Digital, SDR, APRS, WinLink, etc.
13. Basics of Electronics—how things work

Current as of January 2025

Name/Call Sign/Phone Number/Topic:

Adam W2NCC 360-870-7894 (4, 5, 6, 7, 11)
Dave N7HT 253-363-1692 (1, 2, 4, 6, 8)
Dave W7UUU (253-820-0890 (2, 4, 6, 9)
Al N7OMS 253-495-9068 (10, 12)
Mike W7XTZ 253-405-8095 (6, 8, 10)
Stephen AD7AB 253-212-9437 (1, 3, 4, 12)
Randy WB4SPB 253-761-9391 (2)
Phil K7PIA 253-307-4781 (9, 10, 12)

Are you an RCT member with skills to offer?

Please let any officer know and we can add you!

Note: *Providers or users of the Elmer Board must be local to the Radio Club of Tacoma. This is a local club service for our local members only. Thank you!*

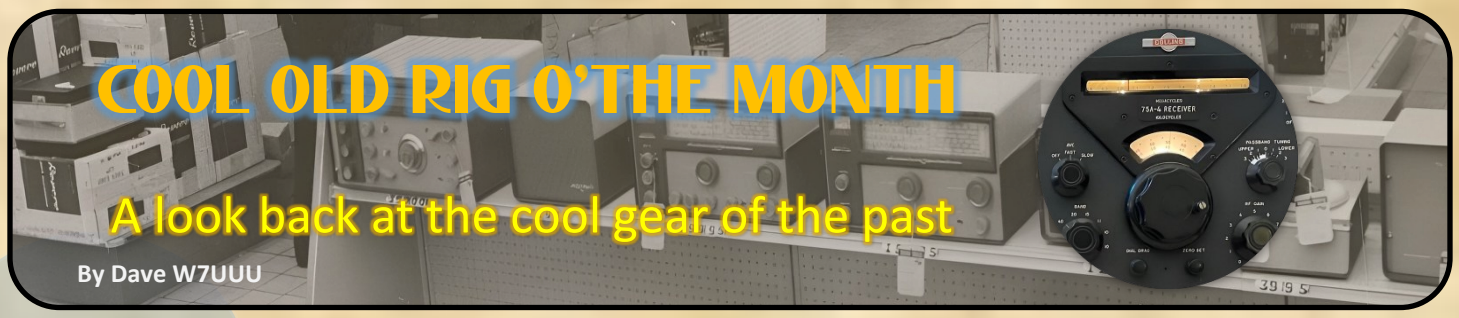
COOL OLD RIG O'THE MONTH

A look back at the cool gear of the past

By Dave W7UUU

The Heathkit SB-104 was a landmark product for the Heath Company, marking the firm's transition from discrete, analog HF transceivers to more compact, solid-state, modular designs. First appearing in the 1974 Heathkit catalog, the SB-104 represented a bold step into the era of synthesized frequency generation and modular construction, using plug-in circuit boards interconnected by ribbon cables. This architecture was designed to simplify assembly and servicing, particularly for the kit builder.

Below: The Heathkit SB-104(A) full station lineup in the shack of Dave W7UUU



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HOWEVER, WHILE THE SB-104 LOOKED PROMISING on paper, its initial release was plagued with technical shortcomings that ultimately led to the development of an improved version, the SB-104A. It was very much Heath's first big stumble after years of leading the pack in ham radio kits.

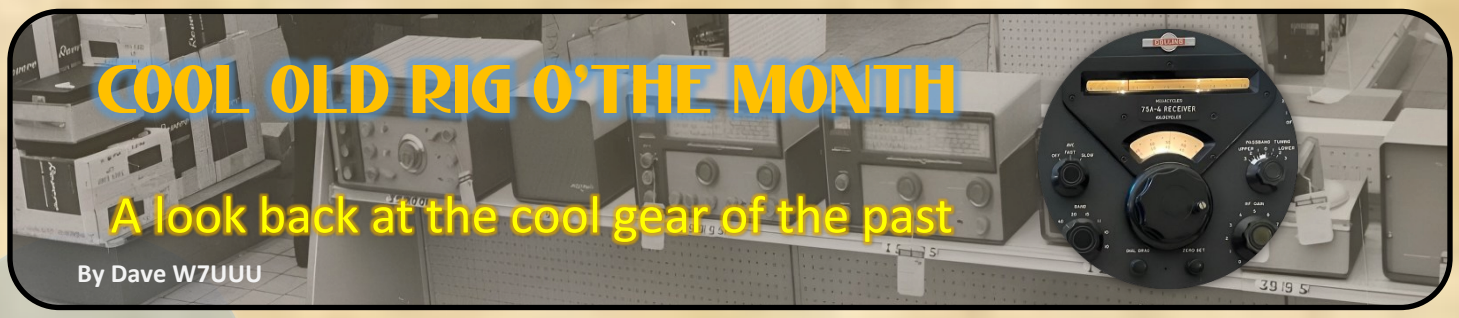
The SB-104 covered the amateur HF bands from 80 through 10 meters, excluding the WARC bands which had not yet been assigned at the time of its release. It operated in both upper and lower sideband, CW, and RTTY modes, using a 5 MHz IF and an LSB/USB filter scheme familiar to builders of earlier Heath products. And unique for Heathkit, it was their first transceiver that was 100% solid state, including the driver and the finals, with a "no tune" output section that could produce a full 100 watts output .

Internal view of the SB-104 showing the plug-in card construction with 13 glass– epoxy PC boards
Photo: K5BCQ at this LINK

One of its more forward-looking features was its use of a PLL (phase-locked loop) synthesized VFO. This allowed for frequency stability that was vastly superior to Heath's prior analog VFOs, though it came at the cost of more complex circuitry. The display was a six-digit LED frequency readout—still something of a rarity in 1974 and a step ahead of many competitors still relying on analog dials.

The original SB-104 was priced at $699.95 in kit form, a relatively modest figure for a full-featured HF transceiver in its class. The matching accessories, including the SB-604 speaker/power supply and the SB-644 remote VFO, pushed the total investment higher, but Heathkit customers were accustomed to piecing together entire stations over time.

Unfortunately, the SB-104's initial design suffered from a host of design and engineering issues. Reliability was inconsistent, and builders frequently encountered difficulties during alignment and checkout. Key design flaws included poor thermal stability in the VFO, insufficient shielding between circuit boards leading to crosstalk and spurious signals—or "birdies" as they are called, and a fragile power amplifier section that was prone to failure under even moderate load mismatches. The audio quality was often described as "muddy," and the CW waveform suffered from key clicks due to the envelope shaping circuitry being an afterthought. In addition, many builders



COOL OLD RIG O'THE MONTH

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experienced difficulty aligning the PLL sections and found the service manual inadequate to support troubleshooting.

This was all due to a couple major factors: new technology that the Heath engineers were not yet fully at ease with, and a big rush and push for a Christmas 1974 delivery.

Chuck Penson, in his comprehensive reference Heathkit: A Guide to the Amateur Radio Products, noted that the SB-104 "was one of Heath's more ambitious projects, but it came to market before all the bugs were worked out." Penson detailed how early adopters often returned their rigs for factory servicing, and in many cases, Heath issued Service Bulletins advising of modifications to improve stability, reduce harmonics, and enhance user satisfaction.

Responding to customer complaints and internal quality control data, Heath soon released the SB-104A, a revised and vastly improved version of the original transceiver. The SB-104A incorporated numerous circuit revisions—some quite major—aimed at enhancing reliability and performance. Key changes included reworking the PLL circuitry for better lock range and stability, redesigning the PA section with more robust transistors and improved cooling, and introducing better isolation between modular boards. A new CW shaping circuit was added to provide cleaner keying, and audio fidelity was improved with component value changes in the speech amplifier and filter networks. In other words, the engineers finally had the time they needed to prepare the SB-104 for market—rather than the sales-driven rush to deliver by a deadline, "ready or not".

The SB-104 was truly a complex radio, not only from an engineering standpoint, but also from an assembly perspective as well: both versions of the radio used more than 275 solid-state devices including 31 ICs. It was not a radio kit for beginners by any means, but as always, Heathkit provided superb manuals and offered extraordinary service after the sale. Their motto for decades was "We won't let you fail" - their commitment to providing excellent customer support for their loyal kit builders.

Service Bulletins were issued for owners of the original SB-104, detailing many of the changes that were

Heathkit SB-104
14 307.6
HEATHKIT
Now includes new sensitivity modification which improves sensitivity on all bands. Existing owners of SB-104 may obtain a free of charge modification kit upon request.
Completely solid-state design . . . including the finals. Over 275 solid-state devices, including 31 integrated circuits.
True digital readout. Six ½" gas-discharge displays deliver resolution down to 100 Hz with across-the-room visibility.
Completely broadbanded. Neither the transmitter nor receiver sections require tuning from 3 to 30 MHz . . . instant QSY from 80 to 10 meters is a reality.
Circuit board construction. Most components mount on 15 circuit boards for easy assembly. The seven major boards can be extended out of the chassis for adjustment or troubleshooting while rig is operating.
Virtually no point-to-point wiring. Two large wiring harnesses comprise about 95% of the SB-104's wiring.
Complete back-panel connections: Phone patch in & out; auxiliary audio input; speaker; key; ALC; VFO in & out; driver out; IF out; accessory plug; power plug; two spare jacks; separate transmit & receive antenna jacks.
New digital noise blanker plugs into SB-104 & solves the ignition noise problem. Provides up to 50 dB of effective blanking. Rep rate 10 to 2000 pulses/sec.; pulse widths 1 to 250 μsec.
New mobile mount features hinged rear brackets and telescoping front support . . . accommodates different transmission hump widths and insures proper front panel height above seat.
The quality parts used in Heathkit products assure quality performance.

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COOL OLD RIG O'THE MONTH

A look back at the cool gear of the past

By Dave W7UUU

Another view of the SB-104(A) station in the shack of Dave W7UUU, March 2025

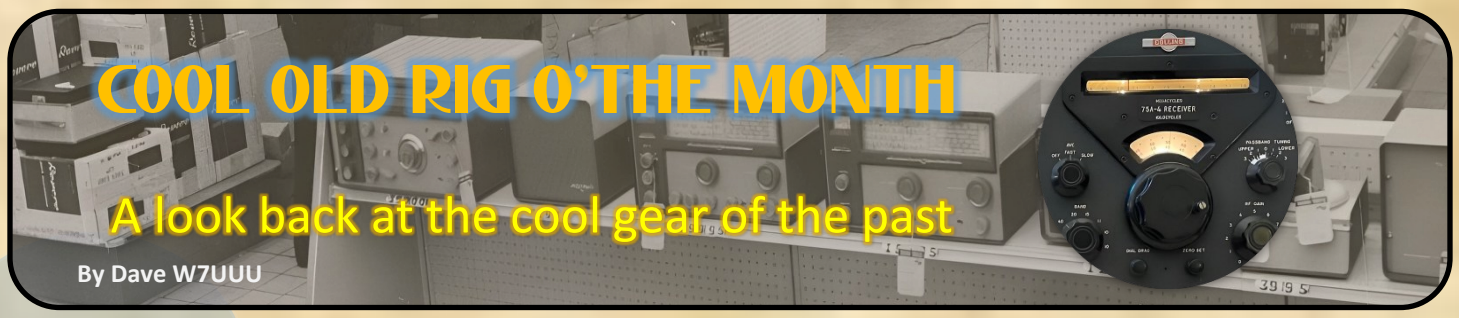
standard in the SB-104A. These included Bulletin #SB-104-1, which addressed PLL unlock conditions; #SB-104-3, which corrected distortion in the transmitter audio chain; and #SB-104-6, which implemented a power amplifier board revision. Many of these bulletins were field-installable by skilled kit builders, although some required advanced equipment or factory retrofitting.

Heathkit offered an upgrade path for SB-104 owners wishing to bring their units up to SB-104A standards. This included replacement PC boards for the synthesizer and final amplifier stages, as well as improved shielding and cabling components. Some users undertook the upgrades themselves, while others sent their transceivers back to Heath's Benton Harbor service department for professional upgrades. The result, in many cases, was a reliable and fully functional SB-104A that retained the original's innovative architecture but with much-improved operational characteristics.

The particular SB-104(A) that lives in my shack and is featured in the photos came to me as an amazing surprise gift from a generous ham, Bob K0WYL of Columbia, Missouri.

In February, 2023, he listed his complete SB-104(A) station for free on QRZ. "Offering free to good home / shack of a fellow ham who likes old Heathkit equipment" is how his ad read. A number of responses were received, but Bob kindly accepted mine and I happily paid full-fare shipping for all of the parts and pieces of the station. It consisted of the SB-104(A) transceiver, SB-602 speaker with the HP-1144A power supply inside of it, SB-644 external LMO, SB-634 station console, and HD-1414 electronic keyer, and the HDP-121 microphone. (I happened to have the matching SB-614 station scope on hand, which made for an entire lineup!).

I've referenced this transceiver as an SB-104(A) with the "A" in parentheses for a reason: Bob over the ensuing years since he originally built the unit followed



COOL OLD RIG O'THE MONTH

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By Dave W7UUU

every one of the Heathkit Service Bulletins issued, and painstakingly upgraded the transceiver to full SB -104A status. That represents a remarkable amount of work, calling for "unbuilding" significant portions of the radio to be rebuilt using new Heathkit-supplied replacement boards and parts. It was an amazing labor of love and devotion. It wasn't born an SB-104A, but instead became an SB-104(A).

This transceiver works extremely well, on all bands and modes. I have used it fairly extensively over the last two years on both SSB and CW (using the HD-1414 keyer that Bob also built). It's really a delight to use—with that crisp receive audio that Heathkits were very well known for. Whether working local HF nets or chasing POTA activations on CW, I've had a lot of fun making sure this classic radio gets lots of time on the air in my shack.

To date, I'm closing in on a Nostalgic Worked All States with the SB-104(A) - a pastime of mine for many years: acquire a great old rig of the past, and set about working all the U.S. states and then focus on achieving DXCC. Most of the time, it's a long journey and that makes it all the better to slowly achieve the goal over months and even years.

I think about this rig often, and thank Bob for his kind-ness to make it available the way he did. And to the local club members reading this, if you ever want to experience an SB-104(A) transceiver on the air, by all means ping me and come on over to spend a few hours seeing what the state of the art Heathkit gear of the 1970s was like to use on the air.

-Dave W7UUU

The SB-104 station (prior to the upgrade to the "A" version) around the time it was built by Bob K0WYL in Monterey, CA in 1976-1977

The SB-104(A) station around 2022 prior to changing hands from Bob K0WYL to Dave W7UUU

INTERNATIONAL DOG DAY 2025

Special Event K2D

By Caryn Eve Murray KD2GUT

WHEN A GROUP OF RADIO OPERATORS BEGIN CALLING "CQ INTERNATIONAL DOG DAY" IN AUGUST, THEY'RE NOT JUST LOOKING FOR QSOs...

They are in search of people who have room in their hearts to help the abandoned, abused and homeless dogs around the world in whatever way they can. These dozen or so special event operators know the power of rescue because they've been deeply involved in it themselves: Hanz YL3JD and his wife opened their home – first in Holland, later in Latvia – and have given needy dogs a second chance at a new family. In Australia, and later in Germany, Ed DD5LP and his wife discovered – several times – that their household was incomplete without canine company. Many of the other operators' rescued dogs were adopted after hard lives on the street; others were at the pound, hours away from being euthanized.

International Dog Day (and in the US, National Dog Day) is August 26 every year. The tradition was created by US pet advocate Colleen Paige as a day to recognize the needs of society's unwanted and cast-off dogs and affirm the commitment to adopt, donate or raise awareness of their special needs.

Hanz amplified the original message by adding an amateur radio component in 2022, taking the special-event callsign YL1DOG and operating as a single station. The following year he was joined by Chris G5VZ, and David G4YVM, in the UK. By 2024, a team of eight US rescue-dog advocates, operating as K2D, had come on board. This year is the biggest yet, as hams in Germany and other countries run with the pack. All operators will be looking to hear from dog-lovers and supporters in either CW or SSB on HF, on VHF/UHF simplex, or via DMR and EchoLink.

The international team has added incentive certificates, including special endorsements such as "Full Kennel," the equivalent of a clean sweep. Their website, www.dogdayradio.org, is updated regularly with the operators' special-event callsigns, their operating schedules, a chance to meet the dogs who inspired them and hear their stories.

In case you are wondering where the *cats* are – well, they're running ahead of the dogs! International Cat Day will be operating as a separate event, two weeks before the Dog Day operators get on the air – and they will be carrying a similar message for cat-rescue awareness. See catdayradio.org for details.

For live updates of both events, to search for the different callsigns, to see the operators' schedules or to apply for and download award certificates visit these links when they become available:

https://hamlog.online/icd

https://hamlog.online/idd

Meanwhile, be aware that all special-event operators will be working like dogs – and why not? – because they want to hear and share as many rescue stories as they can.

-Caryn KD2GUT

Brian K3ES's Boston terrier Molly

Hanz YL3JD's dogs in Latvia—Buča on the left, Sissi on the right

STRAY TOPICS OF INTEREST:

Things That Make You go Hmmm...

Contributed by Eric KL7AJ

I CAME ACROSS A THOUGHT-PROVOKING COMPUTER MODEL THE OTHER DAY.

Imagine this: you take the ten smartest people on Earth and send them off in a spaceship to a distant planet that's identical to Earth—same atmosphere, same geography, same resources, all in the same distribution. The catch? They bring nothing but their brains—the full collective knowledge of modern humanity, but not a single tool.

So what happens?

Even if they *know how* to build a modern V8 engine, it would still take them 2,000 years to make one. Why?

First, you need iron. But where is it? Nobody knows—so you send out exploration teams. Fortunately, your group includes a cowboy and a Native scout. But they need a horse to travel. And before they can get a horse, they need to stay alive long enough to find one. Thankfully, you brought a farmer—maybe you'll grow enough food to survive.

Suppose, after 20 years, you actually *find* iron ore. Now you need to dig it up. A shovel would help—but shovels require... iron. You might carve one from wood, but chopping down a tree takes a saw... which also requires... iron. You're stuck in a loop.

Let's say you manage to extract some ore. Now you have to smelt it. That takes fire. Fire needs wood. Cutting wood requires tools. Which require... iron. Back to square one.

And so it goes. A grinding chain of Catch-22s. Every step forward is blocked by the need for tools that require other tools, which require processes that don't yet exist.

And remember—they already *know how* to build the engine. That's not the hard part. The hard part is building *everything else* from dirt and ideas.

So next time you swing by the hardware store for a lock washer, take a moment to appreciate the thousands of years of progress that made it possible. *-Eric KL7AJ*

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SEA-PAC 2025

Photo: W7UUU

SEA-PAC 2025 IS NOW IN THE HISTORY BOOKS

Held annually in Seaside, Oregon, SEA-PAC is the Pacific Northwest's largest amateur radio convention and is also the ARRL Northwestern Division Convention. Spanning three days every year on the first weekend in June, it's truly a major event. Featured are ARRL officers and presentations, along with many seminars given by hams from all over the country. And of course, one of the largest hamfests in the region as well.

This year, a number of W7DK members attended and these are a few photos submitted for publication.

-Dave W7UUU, editor

Photo by Dave W7UUU

We arrived on a beautiful Thursday afternoon, May 29th, to take a walk around town before dinner

Photo by Dave W7UUU

Despite the gloom, gray, and drizzle, crowds were on the beach in force and the life guards were on duty

Photo by Becky KG7FZH

Radio on the Beach! L>R: Randy KK7RHR, Jeff W8NGS, Sam N9MII, Unknown, and in red, Nathan WA7BUG (formerly KK7QND)

SEA-PAC 2025

Photo: W7UUU

Photo: Adam W2NCC

BJ KO7T gives his presentation "Go Outside and Play" all about POTA operations

Out Reach Ideas
New Hams - N7CFO Lynn new Ham list
The volume of new hams is small
Email address not available - Physical mail
Non-club members
Monthly Emails (what the club is doing)
Free tools: email octopus
Information booth at Ham Fests (three fold flyier/ talking points)
Proved - New Ham Kit (people who passed their tech license)
Get to know your Radio Club Conference (13 new members)

Photo: Becky KG7FZH

Adam W2NCC gives his presentation "Growing Your Club with Simple Ideas"

Photo: Anne N7ANN

Dave W7UUU gives his presentation on "Limited Space & HOA Antennas"

Photo: Submitted by Becky KG7FZH

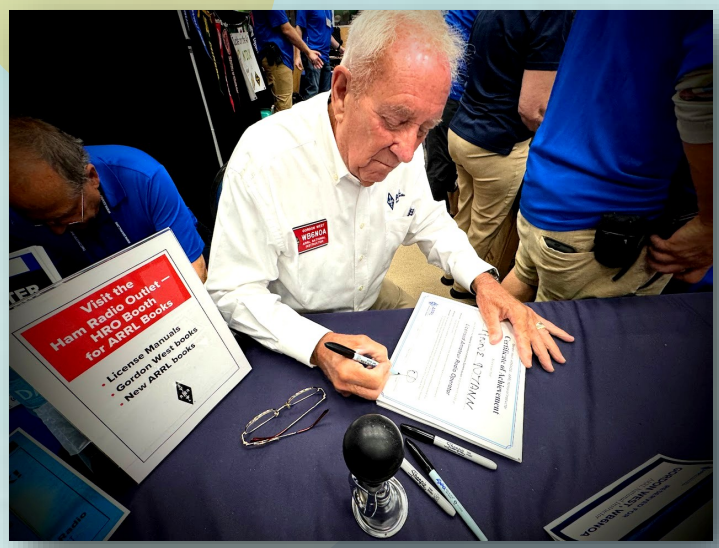
Becky KG7FZH & Sam N9MII give their presentation, "Engaging Youth in Amateur Radio"

FIVE RADIO CLUB OF TACOMA PRESENTERS

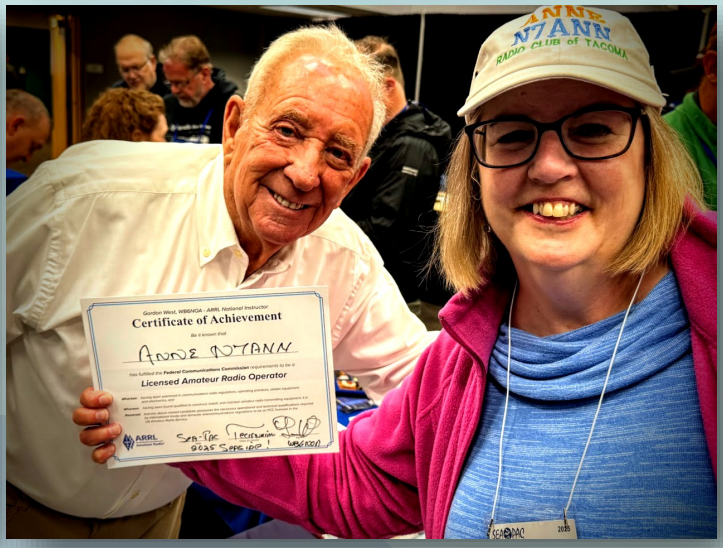
FOUR W7DK PRESENTATIONS AT SEA-PAC 2025!

SEA-PAC 2025

Photo: W7UUU



Gordon West, "Gordo", WB6NOA signs a certificate of accomplishment for Anne N7ANN who used his books back in 2013 to pass her test!



Smiles all around as Anne N7ANN receives her 10+ year ago certificate from Gordo, WB6NOA!

Gordo WB6NOA even made out a certificate for me, W7UUU, because I also used his books way back in the 1990s to pass my Extra exam! Thanks Gordo!

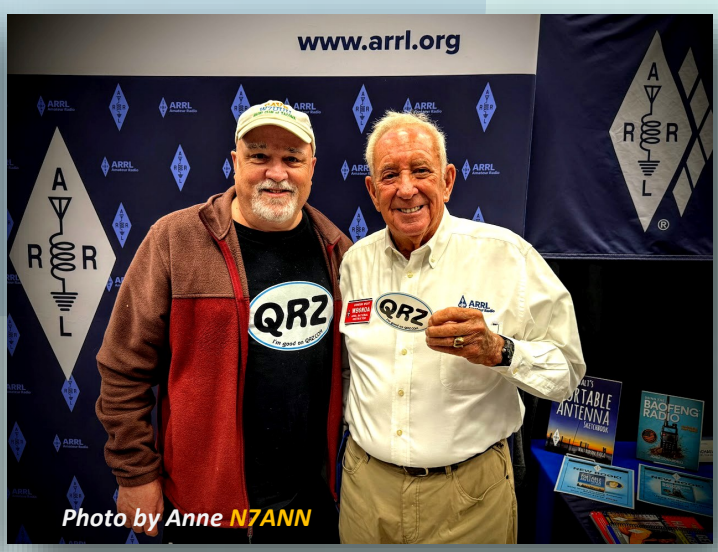


Photo by Anne N7ANN

So what better thing to do than pass on to Gordon WB6NOA a coveted "I'm Good on QRZ" sticker! Thanks, Gordon, for all you have done for the cause of amateur radio for so many years!

All photos this page by Dave W7UUU except as noted

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SEA-PAC 2025

Photo: W7UUU

The isles were really crammed tight this year—probably worse than years past

Turnout was pretty huge all day long

The view from the balcony

This yellow sign sums up much of what ham fests are about these days—like it or not

All photos this page by Dave W7UUU

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SEA-PAC 2025

Photo: W7UUU

At the W7DK Tables—L>R:
BJ KO7T, Mike W7XH, Paul W7PFU, Adam W2NCC

Jeff W8NGS & XYL Shay WI7NGS work deals in the W7DK booth

Mike W7XH hanging with BJ KO7T in the RCT booth

President Adam W2NCC visits with Anne N7ANN

All photos this page by Dave W7UUU

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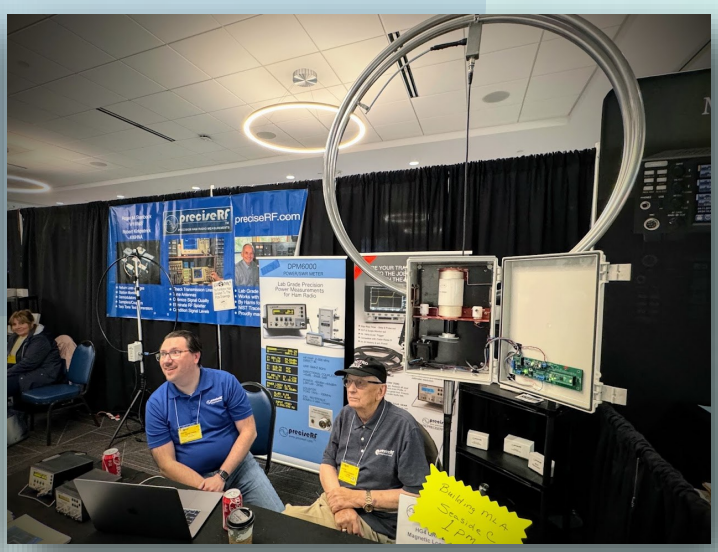
SEA-PAC 2025

Photo: W7UUU

Hip Ham Shirts salesperson shows off the shirt my lovely wife Anne N7ANN was buying for me!

Yaesu booth showing off their flagship, the FTDX-101MP

The new Flex Aurora transceiver brought in the crowds



PreciseRF.com shows off their prototype KW rated stepper-tuned magnetic loop antenna

All photos this page by Dave W7UUU

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SEA-PAC 2025

Photo: W7UUU

David Chan WZ6X shows off his 1966 PRT-4A field radio set complete with helmet

Anne N7ANN visits with Mike W7XTZ

At the ARRL booth L>R:
NW Division Director Mark Tharp KB7HDX
NW Section Manager Bob Purdom AD7LJ
Bark Editor Dave W7UUU
ARRL First Vice President Kristen McIntyre K6WX

Adam K7EDX & son Wesley

Adam is the guy who installed the W7UUU tower and SteppIR DB18E antenna!

All photos this page submitted by Dave W7UUU

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SEA-PAC 2025

"Radio on the Beach—Sea-Pac 2025—Seaside, Oregon"

All photos this page by Kathryn K7USR

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THE WAY BACK PHOTO BOOTH

Highlighted photos from the club's past

Researched & Compiled by the Dave W7UUU

Archive Photo

W7DK Archive Photo

The land right behind the RCT Clubhouse (red dot) on Union Avenue was cleared to build the parking lot behind our building. But at that time, the club used the vacant land for parking for the WF7ARW special event, "Washington 50 Years Amateur Radio Week" (1966). Visitors parked on the dirt and walked to the clubhouse (there were no trees in the way back then). If anyone has more information on this event please contact me.

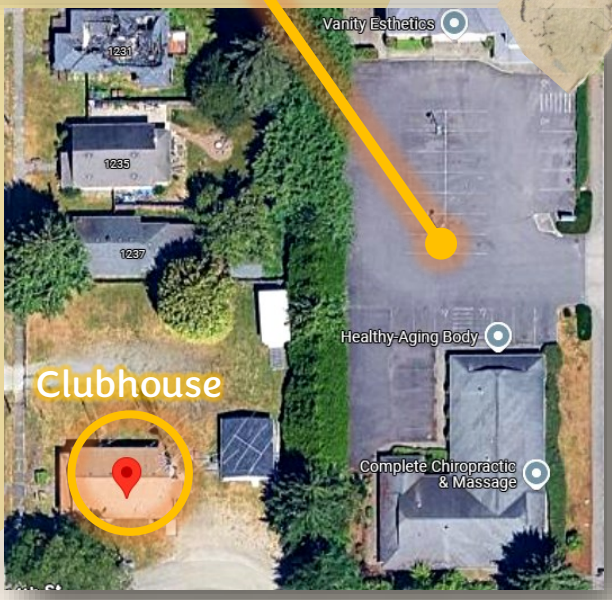

Photo: Google

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MIGHTY DK! QSO REPORT

Reporting all the HF QSO action from the club

EACH MONTH in the Bark, the Radio Club of Tacoma recognizes the members and guests who have made non-contest QSOs using the HF stations at our clubhouse. Saturday Open House, especially, is a time when members have access to this equipment. Why not sit down at one of our operating desks and make a contact or two? Assistance is almost always available for those unfamiliar with the equipment, and if your license class doesn't permit HF operation, ask the denizens of the HF Room or the Saturday clubhouse host to help you find a suitably-licensed control operator to sit with you. It's a feather in the club's hat for the call sign of The Mighty DK to be heard on the airwaves. So get on the air and get your name in the Bark! (Don't forget to *enter your call sign as the operator* into our logging program.) ■ *-editor*

Clubhouse QSOs during this period:

NAME	CALL	QSOs
Gary	WG7X	45
John	K2CCT	39
Mike	W7MKE	37
David	AC7KP	23
Mike	W7XH	20
Julie	W7JUL	6
Sam	N9MII	4

Above: HF Room Flex 6600 & Mercury III

Below: HF Room Icom IC-7610 & KPA-500

Photos this page provided by Dave W7UUU

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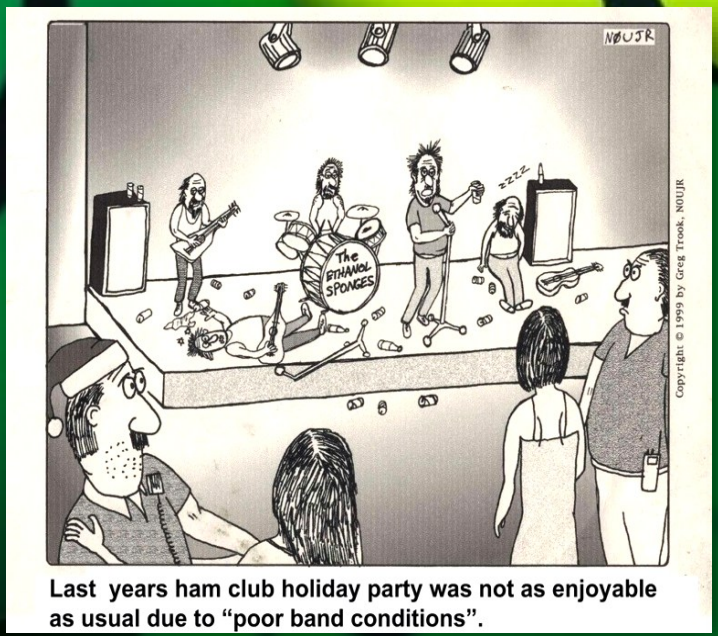
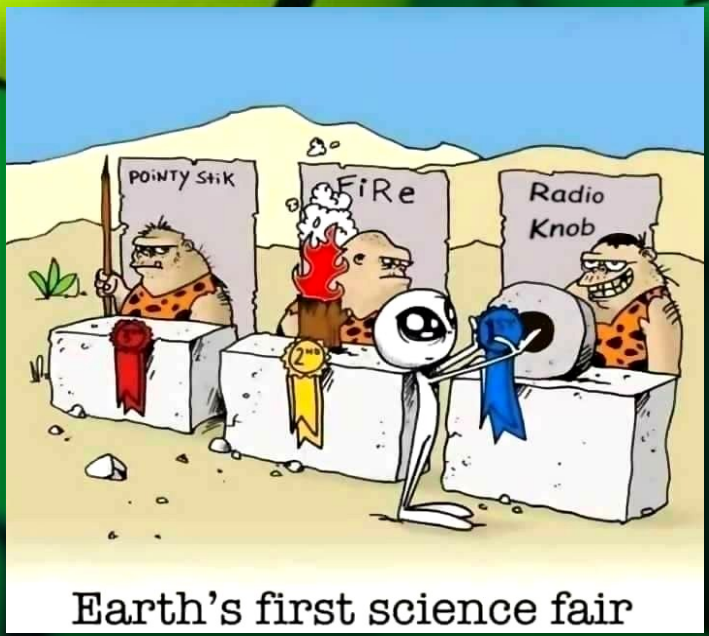
THE FUNNY PAPERS

Ham Humor for Humorous Hams

THIS NEW SUNSPOT CLUSTER HAS RAISED CONCERN AMONG ASTRONOMERS



Last years ham club holiday party was not as enjoyable as usual due to "poor band conditions".



Earth's first science fair

HOW'S DX?

DXpeditions and Notable DX operations

WEB

NG3K Upcoming DXpedition Calendar

July						
2025 Jul03	2025 Jul10	Honduras	HR9	LoTW	DXW.Net 20241222	By K6VHF as K6VHF/HR9 fm Roatan I; 80-6m; SSB CW RTTY FT8 FT4; 100w; QSL via K6VHF Buro or Club Log OQRS
2025 Jul05	2025 Jul11	Mozambique	C94RRC NEW	Club Log OQRS	DXW.Net 20250522	By OK8AU UA3QLC R7AL fm Inhacamba I (IOTA AF-103); HF; CW SSB FT8; 2 stations
2025 Jul05	2025 Jul15	Grenada	J38DX	LoTW	OPDX 20250213	By GM5RDX and J38LD fm Calliste (IOTA NA-024, FK92ca); 80-10m; 100w; QSL via Club Log OQRS
2025 Jul11	2025 Jul25	Iceland	TF	VE2XB	TDDX 20250203	By VE2XB as TF/VE2XB; 160-6m
2025 Jul13	2025 Jul19	Mozambique	C93RRC NEW	Club Log OQRS	DXW.Net 20250522	By OK8AU UA3QLC R7AL fm Chiloane I (IOTA AF-098); HF; CW SSB FT8; 2 stations
2025 Jul14	2025 Jul23	Svalbard	JW0V	I8KHC	DXW.Net 20250408	By OK2WX; 160-6m; CW SSB FT8
RSGB IOTA Contest (Jul 26-27, 2025) Check here for pericontest activity too.						

Click anywhere on the table above to visit Bill's site directly—the hyperlinks will be active there.

Courtesy Bill Feidt, NG3K
used with permission

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Homebrew & Kits corner

RADIO HOMEBREW PROJECTS BOTH LARGE & SMALL

PROJECT PROFILE

THIS MONTH'S KIT FEATURE WAS AN AMAZON whimsical purchase: a 6-digit calculator that also features a resistor color code calculator as well! I like to peruse the many inexpensive kits on Amazon when I have some saved-up points to spend.

I found this interesting calculator kit for the amazing low price of only $14.74 including free shipping (Amazon Prime). It looked like a fun build, and even has a "ham radio workshop function" in that it's not only a standard "4-banger calculator" but it also decodes resistor color codes. Of course, I've had that code memorized since I was knee high to a J-38 key. But still it offered a fun aspect to the project beyond being just a simple calculator.

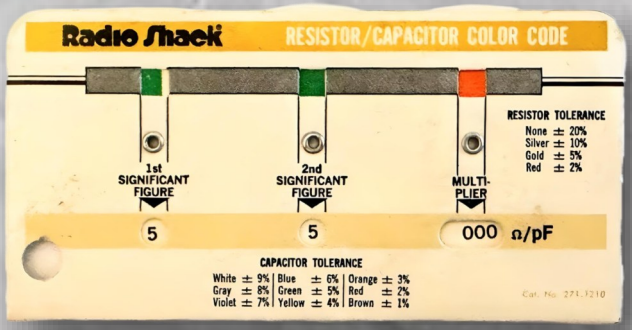
Completed 6-digit calculator kit displaying value of a Green-Green-Orange resistor
Photos by Dave W7UUU

Despite the packaging seeming to have a bazillion parts, it's actually insanely simple. There is a single chip (28 pins!), two LED display blocks, a holder for a CR-2032 battery (included!), a micro USB connector, a single capacitor, and 17 buttons. That's all there is to it.

Building time was about an hour. The quality of the PC board is amazing for the price—high quality through-hole plating, and very high quality parts. I was impressed. The pushbutton switches are in four pieces: the switch, the white plastic cap, the labels (which you cut out by hand with scissors), and the clear plastic cover caps. Each switch has 4 pins to solder, but they are captive—meaning you can snap all of the switches into place then flip the PCB over to solder all of the pins. You don't need to do one switch at a time.

The single hardest part of the assembly was inserting the 28 pin DIP integrated circuit into the socket. You have to carefully leverage one full side of 14 pins against your work surface to bend them fully perpendicular. Then you flip it over and do the same to the other side. Otherwise, you'll never get the chip seated without a catastrophic bending of one or more pins. It takes a lot of force to push that many pins into a chip socket. They don't explain any of that in the scan instructions, so if you decided to build one of these, now you know.

Below: *my 1970s vintage Radio Shack Model 271-1210 Analog Resistor Value Calculator!*



The hardware for the case is super tiny (see photo) - so definitely work over a clean surface because you will drop the tiny nuts and never find them if they fall

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Homebrew & Kits corner

RADIO HOMEBREW PROJECTS BOTH LARGE & SMALL

PROJECT PROFILE

into the carpet!

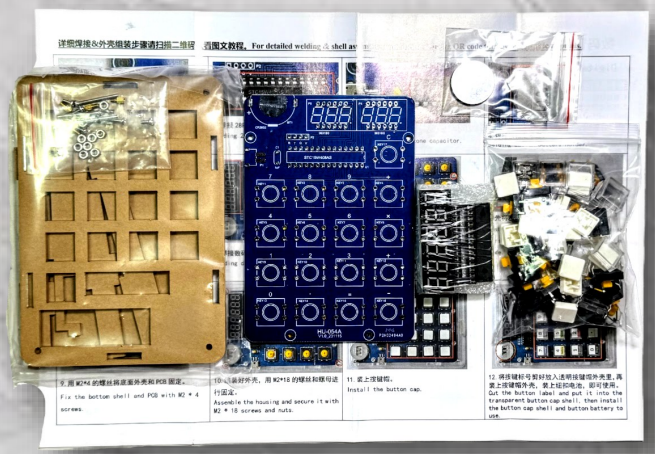
Operation is simple: there are two modes—calculator, and resistor. To select a mode, push and hold the "Mode" button (lower right corner). A lower case 'r' will appear in the display for resistor mode. Then you simply key in the colors on the resistor (including "Silver" for 10% tolerance or "Gold" for 5%... why the thing cares about the tolerance value is a mystery). It will then display the value of the resistor.

Power is from a single CR-2032 3v button cell. Not a smart choice—I doubt you'll get much use out of an LED-display calculator with such a low-current battery. But that's what the USB port is for—power. If you were to want to use this calculator often, I'd highly recommend just plugging it into a spare USB charging device instead of trying to use the LDMOS CR-2032 button battery.

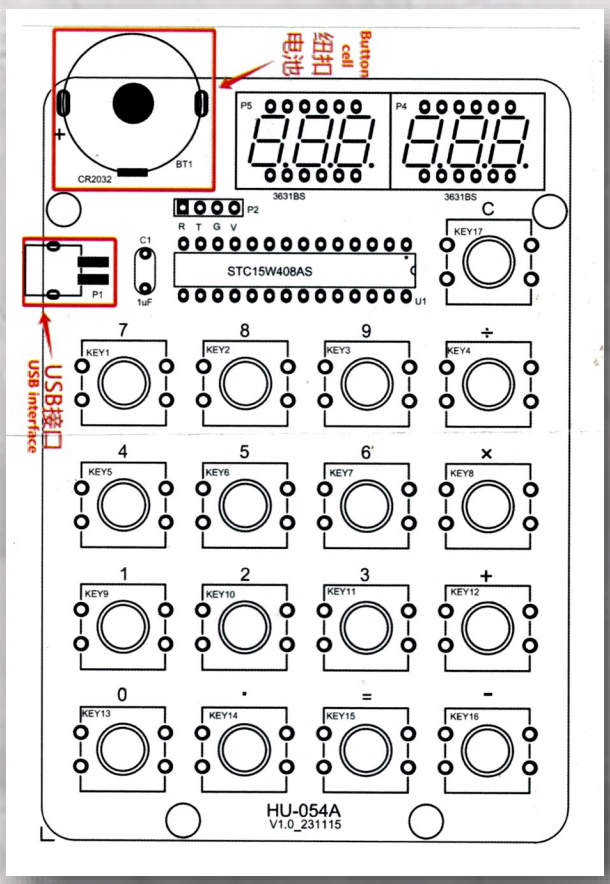
This is a very fun kit—and I can heartily recommend it to anyone wanting to polish their soldering skills, while making something that's actually useful!

-Dave W7UUU

Super tiny hardware for assembly of the kit into the included Plexiglas cabinet. Photos by Dave W7UUU



Seems like a lot of parts but it's actually very simple
Photo by Dave W7UUU



PCB layout showing just how simple this kit really is
Photo by Dave W7UUU

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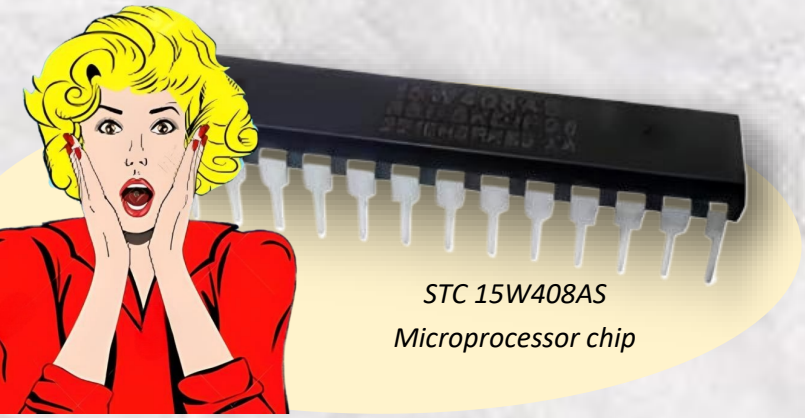
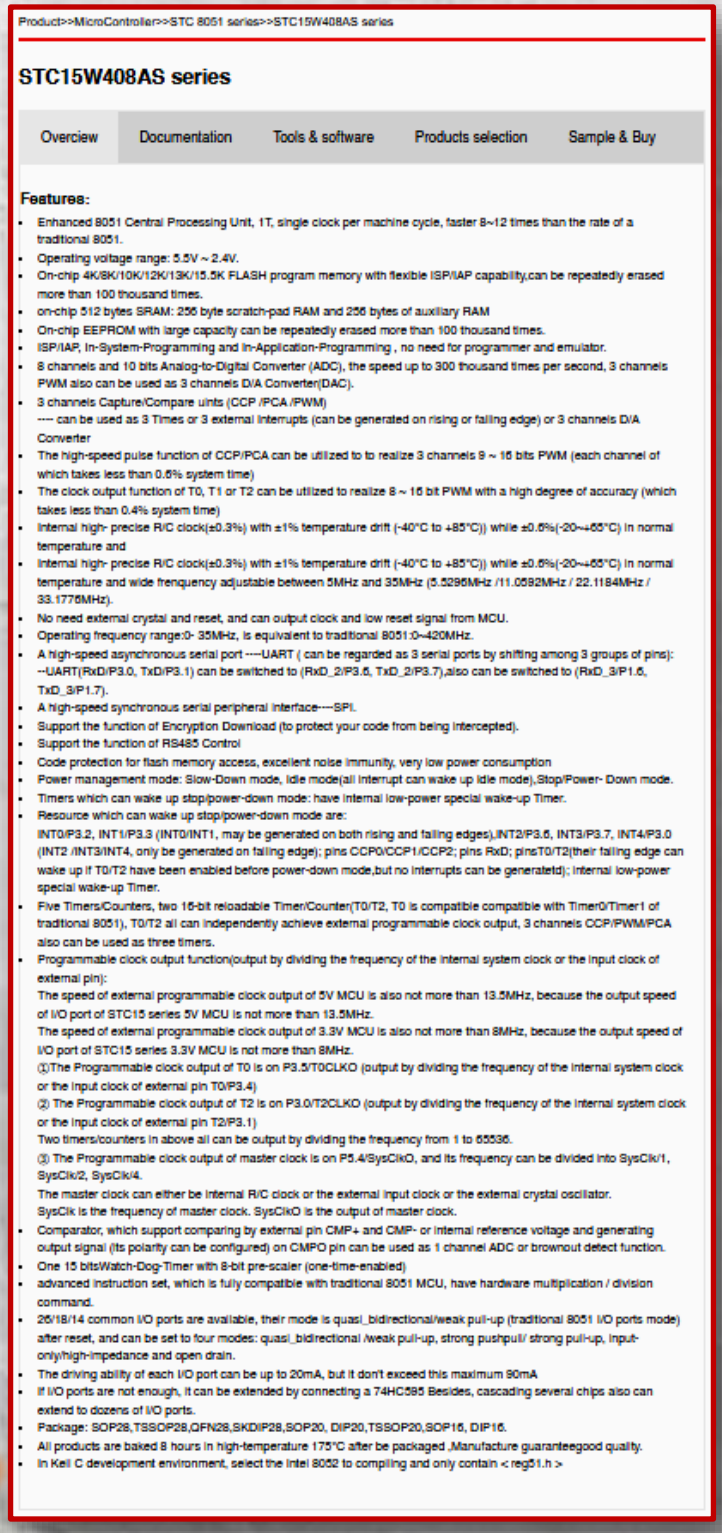
RADIO HOMEBREW PROJECTS BOTH LARGE & SMALL



STC 15W408AS
Microprocessor chip



Product>>MicroController>>STC 8051 series>>STC15W408AS series

STC15W408AS series

Overciew | Documentation | Tools & software | Products selection | Sample & Buy

Features:

- Enhanced 8051 Central Processing Unit, 1T, single clock per machine cycle, faster 8~12 times than the rate of a traditional 8051.
- Operating voltage range: 5.5V ~ 2.4V.
- On-chip 4K/8K/10K/12K/13K/15.5K FLASH program memory with flexible ISP/IAP capability,can be repeatedly erased more than 100 thousand times.
- on-chip 512 bytes SRAM: 256 byte scratch-pad RAM and 256 bytes of auxiliary RAM
- On-chip EEPROM with large capacity can be repeatedly erased more than 100 thousand times.
- ISP/IAP, In-System-Programming and In-Application-Programming , no need for programmer and emulator.
- 8 channels and 10 bits Analog-to-Digital Converter (ADC), the speed up to 300 thousand times per second, 3 channels PWM also can be used as 3 channels D/A Converter(DAC).
- 3 channels Capture/Compare uints (CCP /PCA /PWM)
  ---- can be used as 3 Times or 3 external interrupts (can be generated on rising or falling edge) or 3 channels D/A Converter
- The high-speed pulse function of CCP/PCA can be utilized to to realize 3 channels 9 ~ 16 bits PWM (each channel of which takes less than 0.6% system time)
- The clock output function of T0, T1 or T2 can be utilized to realize 8 ~ 16 bit PWM with a high degree of accuracy (which takes less than 0.4% system time)
- Internal high- precise R/C clock(±0.3%) with ±1% temperature drift (-40°C to +85°C)) while ±0.6%(-20~+65°C) in normal temperature and
- Internal high- precise R/C clock(±0.3%) with ±1% temperature drift (-40°C to +85°C)) while ±0.6%(-20~+65°C) in normal temperature and wide frenquency adjustable between 5MHz and 35MHz (5.5296MHz /11.0592MHz / 22.1184MHz / 33.1776MHz).
- No need external crystal and reset, and can output clock and low reset signal from MCU.
- Operating frequency range:0- 35MHz, is equivalent to traditional 8051:0~420MHz.
- A high-speed asynchronous serial port ----UART (can be regarded as 3 serial ports by shifting among 3 groups of pins): --UART(RxD/P3.0, TxD/P3.1) can be switched to (RxD_2/P3.6, TxD_2/P3.7),also can be switched to (RxD_3/P1.6, TxD_3/P1.7).
- A high-speed synchronous serial peripheral interface----SPI.
- Support the function of Encryption Download (to protect your code from being intercepted).
- Support the function of RS485 Control
- Code protection for flash memory access, excellent noise immunity, very low power consumption
- Power management mode: Slow-Down mode, Idle mode(all interrupt can wake up idle mode),Stop/Power- Down mode.
- Timers which can wake up stop/power-down mode: have internal low-power special wake-up Timer.
- Resource which can wake up stop/power-down mode are:
  INT0/P3.2, INT1/P3.3 (INT0/INT1, may be generated on both rising and falling edges),INT2/P3.6, INT3/P3.7, INT4/P3.0 (INT2 /INT3/INT4, only be generated on falling edge); pins CCP0/CCP1/CCP2; pins RxD; pinsT0/T2(their falling edge can wake up if T0/T2 have been enabled before power-down mode,but no interrupts can be generateld); internal low-power special wake-up Timer.
- Five Timers/Counters, two 16-bit reloadable Timer/Counter(T0/T2, T0 is compatible compatible with Timer0/Timer1 of traditional 8051), T0/T2 all can independently achieve external programmable clock output, 3 channels CCP/PWM/PCA also can be used as three timers.
- Programmable clock output function(output by dividing the frequency of the internal system clock or the input clock of external pin):
  The speed of external programmable clock output of 5V MCU is also not more than 13.5MHz, because the output speed of I/O port of STC15 series 5V MCU is not more than 13.5MHz.
  The speed of external programmable clock output of 3.3V MCU is also not more than 8MHz, because the output speed of I/O port of STC15 series 3.3V MCU is not more than 8MHz.
  ①The Programmable clock output of T0 is on P3.5/T0CLKO (output by dividing the frequency of the internal system clock or the input clock of external pin T0/P3.4)
  ② The Programmable clock output of T2 is on P3.0/T2CLKO (output by dividing the frequency of the internal system clock or the input clock of external pin T2/P3.1)
  Two timers/counters in above all can be output by dividing the frequency from 1 to 65536.
  ③ The Programmable clock output of master clock is on P5.4/SysClkO, and its frequency can be divided into SysClk/1, SysClk/2, SysClk/4.
  The master clock can either be internal R/C clock or the external input clock or the external crystal oscillator.
  SysClk is the frequency of master clock. SysClkO is the output of master clock.
- Comparator, which support comparing by external pin CMP+ and CMP- or internal reference voltage and generating output signal (its polarity can be configured) on CMPO pin can be used as 1 channel ADC or brownout detect function.
- One 15 bitsWatch-Dog-Timer with 8-bit pre-scaler (one-time-enabled)
- advanced instruction set, which is fully compatible with traditional 8051 MCU, have hardware multiplication / division command.
- 26/18/14 common I/O ports are available, their mode is quasi_bidirectional/weak pull-up (traditional 8051 I/O ports mode) after reset, and can be set to four modes: quasi_bidirectional /weak pull-up, strong pushpull/ strong pull-up, input-only/high-impedance and open drain.
- The driving ability of each I/O port can be up to 20mA, but it don't exceed this maximum 90mA
- If I/O ports are not enough, it can be extended by connecting a 74HC595 Besides, cascading several chips also can extend to dozens of I/O ports.
- Package: SOP28,TSSOP28,QFN28,SKDIP28,SOP20, DIP20,TSSOP20,SOP16, DIP16.
- All products are baked 8 hours in high-temperature 175°C after be packaged ,Manufacture guaranteegood quality.
- In Keil C development environment, select the Intel 8052 to compiling and only contain < reg51.h >

WOW! LEST ANYONE PRESUME THE CHIP USED IN THIS calculator is some basic chip, it's actually far from it. Its part number is STC 15W408AS and it's in fact an enhanced 8051 CPU (central processing unit) with 15.5K onboard program memory and an on-board EEROM to store the intended program (a calculator in this case). And best of all, it uses what's called an ISP/IAP which stands for "In-System Programming and In-Application-Programming" which means that the designer of a project such as this calculator can directly write the code to the CPU chip it-self, with no external programmer needed. Once done, they can be replicated like potato chips resulting in a "street price" of less than $1.50 each, and as low as a few cents in bulk. It also contains full LED driver support to operate the LED display blocks (or an LCD display if need-ed). There's no need for external transistor drivers, no external clocking crystals, nothing. Just give it a program, some power, some inputs and some displays and it can become a million different useful things all in a single DIP chip.

I never cease to be amazed at the state of electronics these days, and the fact this simple universal computer chip could be used for so many different applications.

If you're curious to read more, click the specifications page listing image on the right to see all the features.

-Dave W7UUU

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STRAY TOPICS OF INTEREST

RADIO ADS FROM 50 YEARS AGO THIS MONTH

W7UUU

JULY OF 1975 SAW THE LAUNCH of one of the most popular transceivers in ham radio history, the Yaesu FT-101E. The E version was a significant upgrade over the original FT-101 and FT-101B models. Covering 160 through 10 meters, it used TV sweep tubes (as did Drake and Swan at the time) to deliver 260 watts PEP on SSB (130 watts) and a full 180 watts on CW. AM was no slouch either—40 watts. This, combined with easy conversion, made the FT-101 series very popular with the CB crowd to put on 11-meters. Introductory price was $749—or about $4445 in today's dollars—roughly the same price as the current Yaesu flagship, the FT-101MP (also a fabulous transceiver!).

One common myth of the FT-101 series: "Mine is just like new, with the plastic still on the front panel". The reason the vast majority of FT-101s still have the plastic on the front panel is because it's *very* difficult to remove! You have to completely disassemble the panel, even down to removing the black plastic escutcheon around the tuning dial and meter. The plastic was applied before final assembly, making it *almost impossible* to remove.

Still sought after, the FT-101E really is one of the greats of ham radio. And it was first sold 50 years ago this month.

-Dave W7UUU

YAESU FT-101E TRANSCEIVER

Now, more radio from the radio company.

Are Yaesu's FT-101's the finest all-around transceivers in the world? Yes – and now the best is even better. The new FT-101E includes a potent R. F. speech processor. Plus improved, easy-to-use lever switches. A more refined clarifier control for push-button, independent clarifier operation. There's also a 160 meter crystal included without extra charge.

And all the other features that have made the FT-101 series of transceivers among the world's most popular are still here: 260 watts SSB PEP. Globe-circling power on CW and AM. 160 to 10 meters range. 0.3uV receiving sensitivity. And one very important feature you never want to forget is the famous Yaesu warranty, strong dealer network and convenient serviceability.

If you're a serious amateur, you're always looking for more radio. And the FT-101E is just that. $749* buys you a million bucks worth of enjoyment. See your Yaesu dealer or write for our catalog. Yaesu Musen USA, Inc. 7625 E. Rosecrans, No. 29, Paramount, Calif. 90723.

YAESU
The radio.

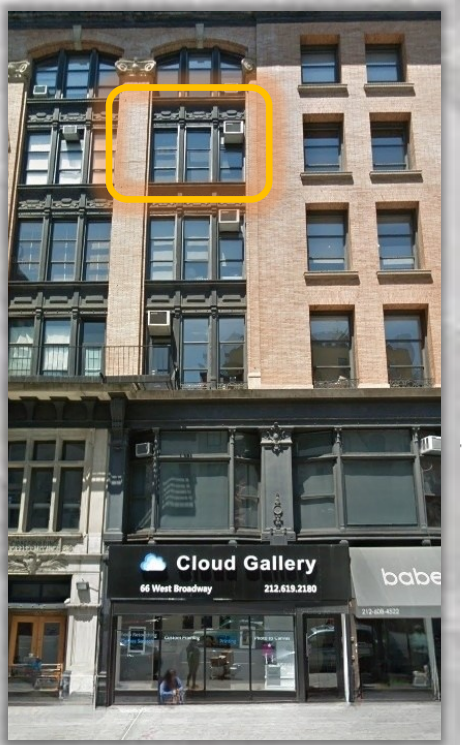
*FT-101EE (less processor): $659.

RETURN TO HOME PAGE

email loggersbark@gmail.com

RADIO EXPERIMENTERS 100 YEARS ago needed much the same tools that hams today need as well. Radio Gem Corp. was just one of hundreds of vendors selling the tools that drove the experimentation in early radio. The "Radio Toolset" consisted of a ratcheted screw driver set, reamers, and countersinks. Just generic tools but to cash in on the radio craze, everything was called a "radio tool" at this time. The photo below is the 66 W. Broadway NY location where "RAGEMCO" once occupied suite E which would have been one floor from the top, and probably a walk-up!

-Dave W7UUU



The Experimenter for July, 1925 635

RAGEMCO

Radio Headquarters for the Finest and BEST Radio Tools

The Simplest Practical Radio Set Made

$2.50

A Complete Radio Receiver including Radiogem, Phone and Aerial

The Complete Outfit Consists of Three Parts

(One)

The RADIOGEM

The simplest radio outfit made—yet as practical as the most expensive. A crystal receiving set that you can operate and enjoy even though you know absolutely nothing about radio. You receive the RADIOGEM unassembled, together with a clearly written instruction book, which shows you how to quickly and easily construct the set, using only your hands and a scissors. The outfit comprises all the necessary wire, contact points, detector mineral, tube on which to wind the coil, etc., etc. The instruction book explains simply and completely the principles of radio and its graphic illustrations make the assembling of the RADIOGEM real fun.

(Two)

The GEMPHONE

An adjustable, 1,000-ohm phone complete with 3-ft. cord—the first inexpensive adjustable receiver made. The Gemphone is of standard type and made of the very best grade of materials throughout. The case is made of turned wood, an exclusive feature with the "GEMPHONE." This is responsible for its exceptionally rich, and mellow tone. Like RADIOGEM, the GEMPHONE is sold unassembled. Our Instruction pamphlet shows how to assemble it in two minutes, using only a screw driver.

(Three)

The AERIAL OUTFIT

Consisting of 100 ft. of standard copper aerial wire and two porcelain insulators.

Complete Radiogem Outfits -	$2.50
The Radiogem, only -	1.00
The Gemphone, only -	1.00
Aerial Outfit, only -	.50

RADIO TOOLSET

This is the handiest set of tools ever made for Radio Work by the makers of the famous "YANKEE" Tools. It contains the following: 1 Ratchet Screw-driver, 6¼ in. long holding all attachments; 1 Blade, 5⅛ x 3-16; 1 Blade, 3½ x ⅛; 1 Blade 2¼ x ¾; 1 Countersink; 2 Socket Wrenches for all small nuts; 1 Reamer to enlarge holes in panel from ¼ x ⅜; 1 Wrench, one end 5-16" square or hex. for jack, other ¼" hex., etc.

PRICE per set—No. 701 ..... $3.00

RADIO HANDI-TOOL

Bends Bus Bar or wire strips and scrapes wire, bores and reams holes, etc. Tool consists of 4 in. black Japanned handle, to which is attached wire bending device, with nickeled ferrule and 3 in. long two sided reamer.

PRICE—No. 702 ..... 50c

HAND DRILL

The hardwood handle is hollow to store drills. Iron frame, nickeled parts, ball bearing three jawed chuck holding and center nic accurately round shank drills from 0 to 3-16. Length of drill, 12 inches.

PRICE—No. 303 ..... $2.25

TOOL CHEST

Set consists of "LOCK-GRIP" master handle, 5" long, black Rubberoid finish with steel chuck, nickel plated, buffed and with the following 9 tools: Saw, brad-awl, large screwdriver, file, scratch awl, gimlet, reamer, chisel, small screwdriver. Each tool of fine steel, drop forged tempered, hardened, and nicely finished. Set comes in leatheroid box with tray.

PRICE—No. 703 ..... $1.85

WIRE BENDING TOOL

For making eyes, loops, bends, and offsets on Bus Bar wire. With this device any Radio Constructor can wire his set to compare favorably with any factory made set. Easier to use and more accurate than pliers. Full directions in box. Made of heavy steel, blued and finished.

PRICE—No. 203 ..... $1.00

SCREW STARTER and DRIVER

Holds any screw by its slot with a firm grip, makes it easy to place and start screws in difficult places. Just the tool for the Radio Constructor. All parts beautifully nickeled and polished.

PRICE—No. 304 ..... $1.00

CIRCLE CUTTER

Especially designed for the Radio Constructor. Made of the finest material and equipped with the highest grade high steel cutting bits. It does three things at once. It drills its own pilot, cuts out plug and puts bead or scroll around the hole in one operation. Cuts holes ⅜ to 4 in. in diam.

PRICE—No. 402 ..... $3.00

401. Same tool but smaller and not fitted with bead or scroll in one operation.

PRICE—No. 401 ..... $2.00

RADIO DRILL SET

Composed of 10 straight shank twist drills, fitting all hand and breast drills. The selection of these drills has been especially made for Radio Constructors and consists of the following sizes: 1-16, 5-64, 3-32, 7-64, ⅛, 9-64, 5-32, 11-64, 3-16, 17-64. Drills are mounted on white Holland Linen with sizes clearly marked.

PRICE—No. 305 ..... $1.25

HAND DRILL

Especially designed for Radio Work by the makers of the famous "Yankee" Tools. A beautiful balanced, small, powerful drill with 4 to 1 ratio of gears for speed. Special chuck 3-32" capacity, to take largest drill, neatly furnished with drill or tool sets. Length over all, 9¼ in. Weight 1⅛ lbs.

PRICE—No. 302 ..... $2.75

ELECTRIC SOLDERING IRON

A perfect tool for Radio Work. Operates either on 110-volt A.C. or D.C. The heat element is of Nichrome, which prevents overheating and assures the desired even temperature. Size of Iron, 10½ in. long. A 4-ft. cord and plug is furnished.

PRICE—No. 800 ..... $2.00

Three-in-One Nut Wrench. Consists of handle with hollow stem 6 inches in length and three interchangeable sockets fitting regular sizes of nuts. The hexagon sockets grip the nut solidly.

PRICE per set—No. 301 ..... 65c

Combination Plier, Wire Cutter, Wire Former and Wrench. Drop forged, slender but exceptionally strong. 6 in. long.

PRICE—No. 202 ..... 75c

Side Cutting Nipper, Lap Joint. For cutting all kinds of wire. Jaws hardened and oil tempered. Natural steel finish with polished jaws. Length 6 inches.

PRICE—No. 201 ..... 75c

Long Sharp Nose, Side Cutting Pliers. Just the pliers for the radio constructor. Heads and cuts all kinds of soft wire. Nose 1½ inches long, black body, polished jaws. Length 5½ inches.

PRICE—No. 200 ..... 75c

Order all tools by order number. All goods are shipped free of transportation charges to all parts of the United States and possessions the same day as the order is received.

MONEY REFUND GUARANTEE

If you are not satisfied money will be refunded on return of goods.

The RADIOGEM CORP., 66-E W. Broadway, New York

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email loggersbark@gmail.com

TNT THE NEW HOT THING

Hot and new products to think about

W8TEE

TR1-EP DIY SDR Transceiver

Introducing the T41-EP: A DIY SDR Transceiver for Hams on a Budget—As submitted to *The Bark* by Jack Purdum, W8TEE

An open-source ham radio project born on a Field Day drive takes flight with innovation, community, and affordability at its core.

CINCINNATI, OH – What started as a casual Field Day conversation between Jack Purdum, W8TEE, and Al Peter, AC8GY, turned into a groundbreaking amateur radio project: the T41-EP Software Defined Transceiver (SDT). Frustrated by limited user interfaces and buried menu options in commercial radios, the pair envisioned a feature-rich, low-cost, open-source transceiver that could serve as a base station for new hams and tinkerers alike.

The T41-EP delivers on that vision. Powered by the Teensy 4.1 microcontroller—boasting 600 MHz clock speed,8Mb of Flash memory, and hardware DSP support—the T41-EP offers CW and SSB capabilities with up to 20 watts of output on the 160-6 meter bands, a simplified user interface, waterfall/spectrum display up to 192 kHz wide, and zero dependence on an external PC.

Development began by adapting the Open-Source "Convolution SDR" codebase, which was restructured from a monolithic 18,000-line Arduino sketch into a modular system using multiple C/C++ source files. Much of the original code for modes like AM and RTTY was removed to streamline the transceiver's purpose: a clean, accessible HF voice and CW radio.

In just three weeks, Al had a working prototype, and the duo named the project the T41-EP—T41 for the Teensy 4.1, and EP for "Experimenters' Platform." The hope was that other hams would improve on the project, and the online community responded. Today, over 3,200 members participate in the Software Controlled Ham Radio group at groups.io, contributing ideas, suggestions, and code.

Reimagining the User Interface

From the start, usability was a priority. Early builds with physical buttons and rotary encoders gave way to a more refined menu system. Thanks to community feedback, the cumbersome "Menu+" scrolling interface was replaced with a two-column system showing all primary and secondary functions on screen. This intuitive approach drastically improved ease of operation during QSOs.

A clever use of resistive switch matrices—later replaced with an I2C interface—allowed 18 physical buttons to be read via a single I/O pin, offering controls for band switching, filtering, tuning increments, and even user-defined functions. A standout feature is the Bearing tool, which allows users to enter a callsign prefix and get a beam heading and distance to that country using stored DXCC data. No GPS or internet required.

ALP CW Decoder and DSP Features

One highlight of the T41 is its advanced CW decoder (nicknamed "ALP"), built with adaptive digital signal processing, correlation analysis, and smart algorithms that adjust to changing code speed mid-QSO. Demonstrated in action on YouTube, the decoder's ability to "catch up" in real-time makes it practical for live use—a rare feat in open-source SDR projects.

TNT THE NEW HOT THING

Hot and new products to think about

W8TEE

Noise reduction, notch filtering, and user-adjustable bandwidth filtering round out the DSP features, all accessible in real time with minimal menu diving.

Modular Hardware, Maker Friendly

The T41-EP was designed with modular, low-cost construction in mind. All PCBs are under 100×100 mm, leveraging low-cost PCB fab deals. Though SMD components are used, most are large-format 1206 parts for easier hand assembly. Open-Source Gerber files are available for all boards.

An early hardware run was produced by 4 States QRP Group as a semi-kit priced at $320. Despite COVID-era supply issues, the kits sold out rapidly—100 units in four days, and a second batch of 50 in just two hours. However, high inventory costs limited further production.

Enter Dr. Bill Schmidt, K9HZ, and Oliver King, KI3P, who redesigned the board set, simplified power requirements, and improved performance by switching to RD16HHF1 power transistors. Dr. Schmidt now sells complete PCB sets at cost (about $15), including optional 20W and 100W PA modules that extend coverage from 160 through 6 meters.

Open Source, Open Future

The T41-EP continues to evolve. A dedicated site, https://groups.io/g/SoftwareControlledHamRadio, hosts updates, and contributor Justin Giorgi, AI6YM, now offers a complete semi-kit using the latest boards and 7” display. Meanwhile, more developers are improving the firmware and hardware almost weekly.

For those interested in the technology behind the T41, Purdum and Peter have co-authored a comprehensive 500± page guide, *Digital Signal Processing and Software Defined Radio: Theory and Construction of the T41-EP*, available on Amazon.

Whether you're a seasoned builder or a new ham looking for an affordable, full-featured rig, the T41-EP is a compelling platform that proves what's possible when ingenuity meets community. *-Jack W8TEE*

Contact

For project files, community support, and more info:
Software Controlled Ham Radio: https://groups.io/g/SoftwareControlledHamRadio
Project info and updates: https://t41sdrtransceiver.wordpress.com
Book: Theory & Construction of the T41-EP SDT (Amazon)
CW Decoder Demo: YouTube Link

Plan Now: Upcoming POTA!

By BJ KO7T

RADIO CLUB OF TACOMA POTA 2025 Schedule

This past year, the club hosted 11 POTA activations at 7 different parks, and we have BIG plans for 2025!

The Club's POTA Chairman, BJ KO7T, is always looking ahead for fun new parks in the state to activate. It's always a great way for members to get involved with amateur radio while enjoying the great outdoors here in Washington State!

Here's the upcoming schedule:

PARK: Saint Edward State Park
DATE: July 20th
TIMES: 10:00 AM PST
NOTES: Parks on the Air Summer Support Your Park Weekend!

PARK: Mount Walker - Olympic National Forest (US-3542)
DATE: August 10th
TIMES: Meet at club at 8:00
NOTES: It is approximately a 2-hour drive from the club to Mount Walker which is south of Quilcene. We will carpool and caravan from the club up to the mountain. There is a road to the top, **but there are no facilities**. This will be a fun adventure!

Everyone is invited to come to our POTA activation events. It's a great opportunity to learn about different antenna types, setting up and tuning antennas with loading coils and/or a counterpoise, learn about different digital modes, and other topics related to portable operations. We usually have 3 to 5 stations set up running many modes on multiple bands. We encourage prospective hams to get on the air, and those with Technician licenses to operate on different bands with a control operator. For club members with a General license, we even have a portable POTA kit that is available to check out from the club the Saturday prior to our club activations. Please see or email BJ Rollison (KO7T) for more information.

-BJ KO7T

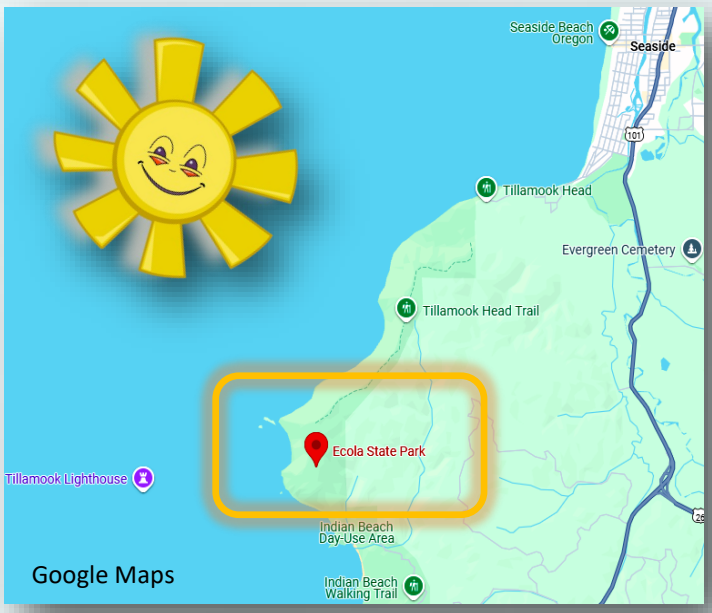
BJ KO7T operating at a recent POTA activation

THIS STUNNING POTA ACTIVATION PHOTO COMES TO US FROM Shay WI7NGS. The operator is her husband Jeff W8NGS, and they decided to do a POTA activation on the evening of Saturday May 31, after a full day of activities at the Sea-Pac convention in Seaside, Oregon.

This was Jeff's first park activation while attending the convention. They picked Ecola State Park, US-2826, which is just a short drive down US-101 from Seaside, for its sheer beauty overlooking the Pacific high atop a cliff. Not visible in the photo but easy to spot from many locations in the park are the remains of the Tillamook Lighthouse, which sits at the crest of a basalt rock formation just over a mile from shore.

Using a 25' whip on a tripod with elevated radials, Jeff worked 14 SSB contacts on 20-meters using his Icom IC-706MK2G.

-Dave W7UUU



Ecola State Park, Oregon—click image to view in Maps

POTA EN FRANCE: MON EXPERIENCE!

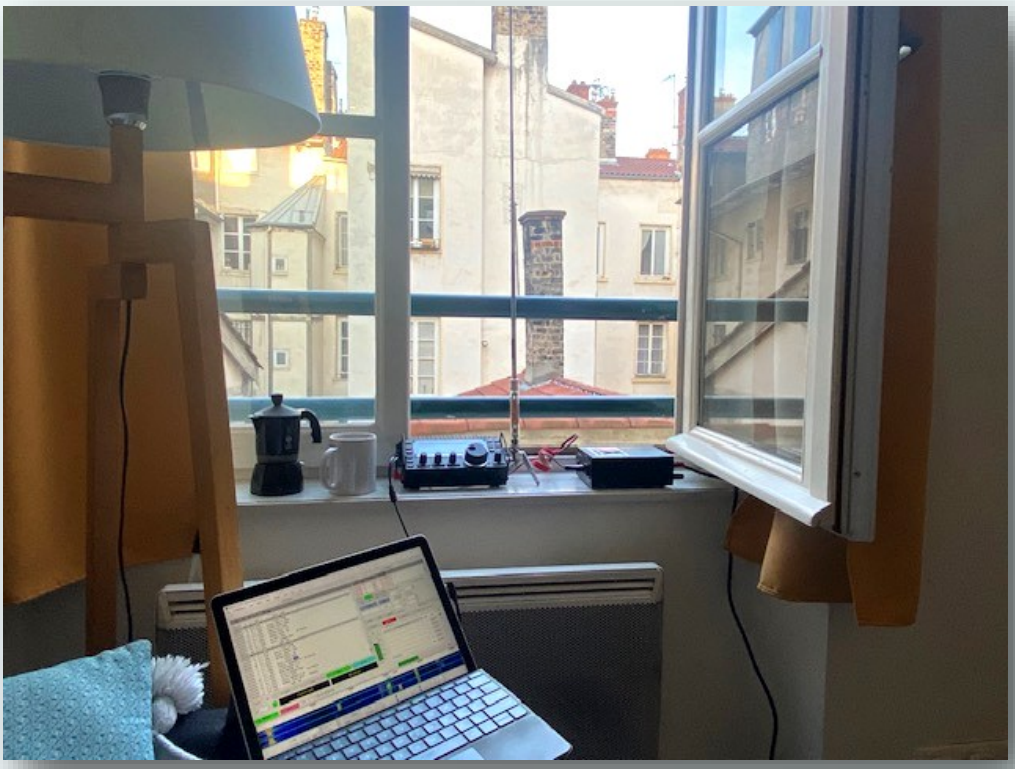
This past April I was fortunate to visit my daughter, who has been teaching in Lyon, France. Of course, I love going to new countries and activating parks, and this would be my first opportunity to play POTA in Europe. And so, the research and planning went into full gear.

I knew that France is covered under the CEPT T/R 61-01 agreement, so I downloaded a copy of FCC Public Notice DA 16-1048 and an official copy of my FCC Extra Class license, and laminated both documents along with a photocopy of my passport. As per the agreement, these are the three things you must have in your possession when operating under the CEPT T/R 61-01 agreement. For more information about CEPT T/R 61-01, click THIS LINK.

Of course, operating in a foreign country means you must also follow their regulations about station identification, frequency usage, and power restrictions. So, I found the French equivalent of our FCC, which is the Agence Nationale des Fréquences, and with the help of my browser's translation support, I was able to find the required station identification for foreign radio amateurs in France.

France not only requires the DX prefix (F/[callsign]), but the regulation also stipulates that either "/P," "/M," or "/MM" is appended to the foreigner's national callsign. This meant that my callsign would be F/KO7T/P. And so, I started programming my CW and RTTY macros with my French callsign, and also set the required callsign in WSJT-X on the Surface Pro 2 that's in my DXpedition kit.

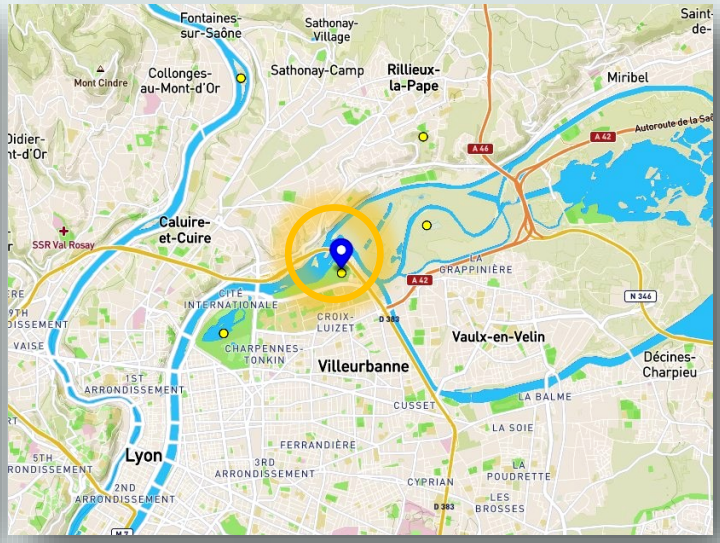
There is one snafu regarding my French callsign. I always create secondary accounts for my DXpeditions on QRZ. Unfortunately, QRZ does not (at this time) support a callsign with both a DX prefix and an operational suffix. So, I created an F/KO7T account, but I did not create a logbook for that account and



Operating from an apartment in France is challenging!

instead uploaded all contacts to both POTA and LoTW.

In France I stayed at an Airbnb apartment near my daughter's apartment. I was hoping to make some extra contacts in the evenings on FT8 using just my Elecraft KX-3 and the AX-1 antenna sticking out the window. Although I was not in the heart of the city, all the windows of the apartment were facing other apartments. I was essentially surrounded by concrete. But I was still able to make a few FT8 contacts with 10 watts and the little AX1 antenna.



My work station at Prairie de la Feyssine Biological Reserve in Lyon, France—FR-5318

The big reward came when I took a short 10-minute car ride out of town to the first park, Prairie de la Feyssine Biological Reserve (FR-5318). This park had not been previously activated, so I was excited to get it in the log for POTA hunters. The park itself runs along the Rhône River — lots of bike and pedestrian trails, and some big open fields. I walked around a bit and settled on a field by the river that had a log that would be my workbench.

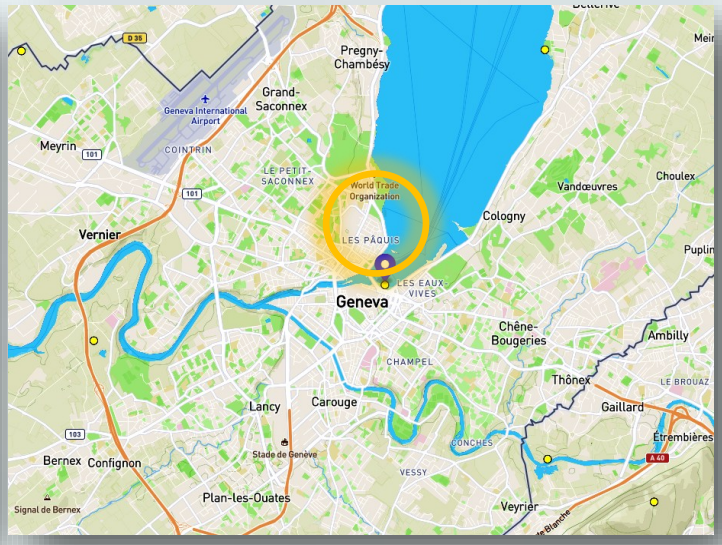
This was a short trip, so instead of taking my typical quiver of DX antennas, I just took my BuddiStick Pro Deluxe. My primary targets for hunters were in Western Europe, and this antenna performs quite well.

I also activated a park named Îles de Crépieux-Charmy Biological Reserve (FR-5317), which is adjacent to Prairie de la Feyssine and is very similar in many ways. Conditions were not great on April 28, but I was able to squeeze out 14 contacts.

I also planned a side trip to Switzerland due to the proximity to Lyon. Getting around Europe by train is the only way to go if you have the time. From Lyon to Geneva by train is only two hours at a cost of $30.

I can't express how much easier and stress-free it was to travel by train instead of the little city-hopper airlines with a radio kit.

I arrived at the train station in Geneva, Switzerland, and walked the half-kilometer to the Le Rhône Genevois – Vallons de l'Allondon et de la Laire Ramsar Site (CH-0029). This park is filled with both locals and tourists. There's a Ferris wheel, a train, lots of tourist ferries in the lake, and of course, lots of people. I managed to find a little area and set up my kit, spotted myself on the POTA app as HB9/KO7T, and began making contacts.



Le Rhône Genevois - Vallons de l'Allondon et de la Laire Ramsar Site (CH-0029)

While I didn't have huge pileups in France or in Switzerland, it seemed that everyone was familiar with POTA. In fact, most of my contacts in Switzerland were park-to-park QSOs. Many of my contacts took a few minutes to chat, which was really a nice bonus.

But I am very happy to say that POTA is not only alive and well in Europe — it is growing quickly, and there is a plethora of parks! And since my daughter will be returning to France in the fall to teach again, I can see more opportunities to explore some of those European parks and hopefully meet some POTA players on the other side of the pond.

It is great fun to be able to combine a hobby with family vacations, business travel, or even solitary travel to explore and visit new countries, especially if there are POTA parks. Operating abroad is not that difficult if you plan well in advance, obtain the proper licensing, and follow the rules and regulations of the host country. One of the things I like most about Parks on the Air is that the program incentivizes us to get out and visit parks, historic or scenic places, and forests that we might otherwise ignore in our travels both here in the U.S. and abroad.

-BJ KO7T

STRAY TOPICS OF INTEREST

Fun stuff for Hams to read!

W7UUU

Hidden Word Contest

This month's hidden word and hidden object is the LDMOS Transistor! This is a planar double-diffused MOSFET transistor used in modern amateur radio amplifiers and high-power transceivers. Specifically, it's the BLF188XR LDMOS transistor—which is rated at the astounding power handling of between 1200 and 1400 watts each, when operated on 50 volts. This is the transistor used in the Elecraft KPA-1500 legal-limit no-tune HF amplifier and is one of the most robust such devices on the market today. The BLF188XR is made by Ampleon USA Inc. and typically sells for around $166 each. The Elecraft KPA-1500 amplifier uses a pair of them to easily achieve 1500 watts output on all HF bands 160 through 6 meters. The term "LDMOS" will be hidden somewhere in text on a page of the bark (as an image, so you can't search it). Email me with the page you found it on and I'll send you some fancy QRZ and W7DK stickers! And as always, finding the word on THIS page does not count!

-Dave W7UUU

Hidden Object Contest

The Ampleon BLF188XR LDMOS Transistor is pictured below. This image will be embedded somewhere in this issue of The Bark. Email me with the page and location and I'll send you some stickers. And of course, this page does not count, as always.

Famous Ham July Birthdays

Jean Parker Shepherd Jr. is probably best known as the author and narrator of the beloved holiday film, *A Christmas Story*, a perennial favorite based loosely on his boyhood experiences growing up on the South Side of Chicago during the 1930s. But long before Hollywood came calling, Shepherd was a ham radio operator. He got his first license at age 14, as W9QWN. Later, after relocating to New York, he adopted the call sign K2ORS and was very active until his passing in 1999. In addition to his amateur radio pursuits, Shepherd built a wide-ranging multi-media career. He was a prominent figure in both television and radio, and became especially well-known for writing and narrating many of his own stories, which aired on PBS and other major networks of the era. His birthday was July 26, 1921.

-Dave W7UUU

Jean Shepherd K2ORS(SK)—photo: Wikipedia

13 COLONIES SPECIAL EVENT 2025

LAST MONTH ANNOUNCED IT, NOW IT'S TIME!!— THE 13 COLONIES SPECIAL EVENT returns this month, offering hams worldwide a unique opportunity to commemorate American history through the airwaves. Scheduled annually from **July 1 to July 7**, this event honors the original thirteen colonies and celebrates the United States' independence, as well as active military personnel and veterans. It's one of the biggest special events of the year and a lot of fun. I've participated many times, earning a "clean sweep" several times.

Event Overview:

For this event, special event stations representing each of the original thirteen colonies will be active. These stations use the following unique 1x1 call signs:

- **K2A** – New York
- **K2B** – Virginia
- **K2C** – Rhode Island
- **K2D** – Connecticut
- **K2E** – Delaware
- **K2F** – Maryland
- **K2G** – Georgia
- **K2H** – Massachusetts
- **K2I** – New Jersey
- **K2J** – North Carolina
- **K2K** – New Hampshire
- **K2L** – South Carolina
- **K2M** – Pennsylvania

Additionally, three *bonus* stations will be on the air:

- **WM3PEN** – Philadelphia, Pennsylvania
- **GB13COL** – United Kingdom
- **TM13COL** – France .

Operating Bands and Modes:

Participants can expect activity across all standard HF bands, *including the WARC bands*, with the exception of 60 meters. Simplex operations on 2 meters and 6 meters are also encouraged. The event supports various modes of operation, including SSB, CW, RTTY, and digital modes. The choice of mode is at the discretion of each individual colony state station.

Participation and Certificates:

Operators worldwide are invited to participate. Making contact with just one colony station qualifies for a certificate, while contacting all thirteen colony stations earns a "Clean Sweep" endorsement. Engaging with the bonus stations adds further accolades. Shortwave listeners (SWLs) are also encouraged to participate and can qualify for certificates by logging the stations they hear.

To obtain a certificate, participants should:

- **Download** and complete the log sheet from the event's official website (link below).
- **Include** a $5 (US) donation and a self-addressed label for certificate return.
- **Send the log** sheet, donation, and return label to the designated address provided on the website.

Tips for Success:

- **Plan Ahead:** Review the event's website for frequencies and operating schedules.
- **Log Contacts:** Keep detailed records of all contacts to ensure eligibility for certificates.
- **Explore Bands and Modes:** Use various bands and modes to maximize contact opportunities.
- **Monitor spotting networks** like DX Summit to track active stations.

This Special Event offers a fun and meaningful way for amateur radio operators to engage with history, honor the nation's heritage, and connect with fellow hams. Whether you aim for a single contact or go for a clean sweep, it's a ton of fun!

For more info, visit the event website: www.13colonies.us.

-Dave W7UUU

13 COLONIES SPECIAL EVENT 2025

Here's what the actual "Clean Sweep" certificate looks like. For each of the stations you work, you get a blue star. And for each of the three bonus stations, you get a stamp—and ultimately the "Clean Sweep" stamp as well.

Another fun aspect of this event—if you like paper QSL cards, each of the stations will issue a very handsome card in exchange for an SASE.

-Dave W7UUU

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email loggersbark@gmail.com

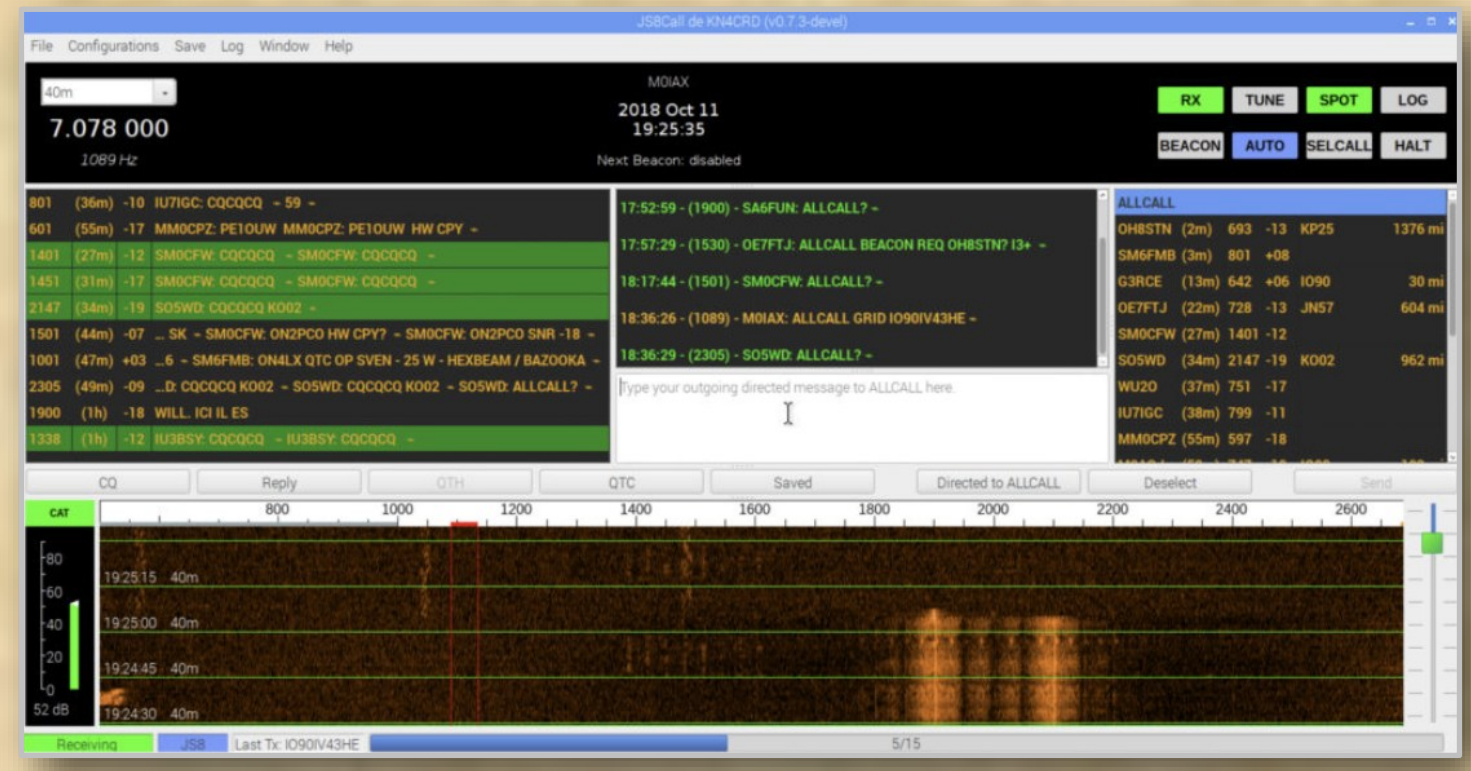
HOW JS8CALL WORKS

IN THE MAY ISSUE OF THE LOGGER'S BARK, I RAN an article all about how FT8 works and how it came to be. The article was well-received by the readers so seems to have been a success. However, I did get a few messages from folks asking if there is any way to carry on an actual QSO using FT8.

The short answer is "NO". FT8, as outlined in the article, was designed to exchange 13 characters carrying the essential information to qualify as a QSO: call signs, signal reports (in dB), and location (grid square). It was never intended to exchange any more information that that.

But if you've ever stared at your FT8 screen wishing you could actually say *something more than* "W7UUU W7DK 73," then you're going to appreciate a mode that came along a few years ago called JS8Call. It's an offshoot of FT8 that still takes advantage of the same incredible weak-signal capabilities, but adds actual keyboard-to-keyboard communication. In other words, you get to have a conversation, not just an automated signal report exchange. If you're at all familiar with PSK31 and how QSOs in that mode work, it's very similar.

JS8Call was created by Jordan Sherer, KN4CRD. He's a software developer and ham who clearly saw the potential for the underlying FT8 concept to be ex-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Next Beacon: disabled
RX TUNE SPOT LOG
BEACON AUTO SELCALL HALT
801 (36m) -10 IU7IGC: CQCQCQ - 59 -
601 (55m) -17 MM0CPZ: PE1OUW MM0CPZ: PE1OUW HW CPY -
1401 (27m) -12 SM0CFW: CQCQCQ - SM0CFW: CQCQCQ -
1451 (31m) -17 SM0CFW: CQCQCQ - SM0CFW: CQCQCQ -
2147 (34m) -19 SO5WD: CQCQCQ KO02 -
1501 (44m) -07 ... SK - SM0CFW: ON2PCO HW CPY? - SM0CFW: ON2PCO SNR -18 -
1001 (47m) +03 ...6 - SM6FMB: ON4LX QTC OP SVEN - 25 W - HEXBEAM / BAZOOKA -
2305 (49m) -09 ...D: CQCQCQ KO02 - SO5WD: CQCQCQ KO02 - SO5WD: ALLCALL? -
1900 (1h) -18 WILL. ICI IL ES
1338 (1h) -12 IU3BSY: CQCQCQ - IU3BSY: CQCQCQ -
17:52:59 - (1900) - SA6FUN: ALLCALL? -
17:57:29 - (1530) - OE7FTJ: ALLCALL BEACON REQ OH8STN? I3+ -
18:17:44 - (1501) - SM0CFW: ALLCALL? -
18:36:26 - (1089) - M0IAX: ALLCALL GRID IO90IV43HE -
18:36:29 - (2305) - SO5WD: ALLCALL? -
Type your outgoing directed message to ALLCALL here
ALLCALL
OH8STN (2m) 693 -13 KP25 1376 mi
SM6FMB (3m) 801 +08
G3RCE (13m) 642 +06 IO90 30 mi
OE7FTJ (22m) 728 -13 JN57 604 mi
SM0CFW (27m) 1401 -12
SO5WD (34m) 2147 -19 KO02 962 mi
WU2O (37m) 751 -17
IU7IGC (38m) 799 -11
MM0CPZ (55m) 597 -18
CQ Reply QTH QTC Saved Directed to ALLCALL Deselect Send
CAT
800 1000 1200 1400 1600 1800 2000 2200 2400 2600
19:25:15 40m
19:25:00 40m
19:24:45 40m
19:24:30 40m
52 dB
Receiving JS8 Last Tx: IO90IV43HE 5/15

JS8Call software in operation Photo: www.JS8Call.com

HOW JS8CALL WORKS

panded to allow full conversations.

His thought process was pretty straightforward: Why not take the core engine that makes FT8 so powerful and flexible under weak signal conditions, but build a mode or "shell" around it that allows real messaging—human-style, not just machine-to-machine. JS8Call was born from that idea, and it's grown into a pretty robust community and operating mode.

At its heart, JS8Call is built on the exact same modulation scheme as FT8—8-tone frequency shift keying (8-FSK) with 6.25 Hz spacing, which is part of why it inherits the same phenomenal ability to decode signals way down in the noise. FT8 is known to decode down to about -24 dB SNR, and JS8Call does the same. That's huge for those of us running low power or playing with stealth antennas. JS8Call's signal will get through where phone or CW might be lost entirely. But where FT8 limits you to a few highly-structured exchanges, JS8Call lets you type out full sentences, pre-written macros, or even have an extended ragchew if the bands permit.

Of course, the trade-off is speed. FT8 packs all that structured data into 15-second transmission intervals, and QSOs are over before you know it (105 seconds or less, total). JS8Call slows things down a bit—transmissions can still be short, but they're not limited to those exact time slots or message formats. That's a big deal and what makes JS8CALL stand out. In FT8, if your signal report doesn't arrive right on schedule, the other station might time out and move on. JS8Call is much more forgiving, and you can reply or resume a tough-going contact more naturally.

You still need WSJT-X installed, at least in the background, because JS8Call borrows its code libraries and modulation routines from WSJT-X. But you don't actually operate WSJT-X itself while running JS8Call—they're separate programs. JS8Call has its own standalone interface and GUI that's quite intuitive. If you've used FT8, you'll feel right at home, but you'll also immediately notice how much more you can do. There's a big typing area for entering messages, macro buttons for common phrases (just as often done using PSK31 and RTTY), and features like directed messaging (like sending a message to a specific callsign), store-and-forward relays, and even APRS integration.

Yeah, you read that right—JS8Call can hook into the APRS network. That means you can send an APRS position beacon or short text messages to other APRS users, even if you're not near a VHF repeater or digipeater. It uses HF instead. That opens up some pretty fun possibilities, especially for emergency communications or backcountry hams who want to stay in touch over long distances.

One of the clever things JS8Call adds to the mix is what's called "a heartbeat system". Stations can beacon out their presence every so often, and others can auto-acknowledge or relay that information. So even when you're not directly messaging

HOW JS8CALL WORKS

someone, your station can act as part of a mesh network of sorts—relaying, receiving, and acknowledging activity. It makes the whole thing feel alive, like a digital community pulsing gently in the background of 40 meters (or any other HF band).

Popularity-wise, JS8Call is never going to eclipse FT8. Let's face it—FT8 is everywhere, it's semi-automatic, and it's a dream for those wanting to work DX with limited antennas and low power, especially.
But JS8Call has carved out a loyal user base, especially among hams who enjoy digital modes but want to feel like they're actually talking to someone. It's also become popular with ham preppers and the EmComm crowd, because of its ability to pass longer-form text over potentially poor bands with minimal power. Some folks even run JS8Call as a kind of digital message drop box—leave your station on, and it can receive and hold messages while you're away.

As for benefits, well, they stack up pretty nicely. Like FT8, it's great for low power and weak signals. But unlike FT8, it lets you be expressive, and not just in 13-character bursts of very limited data. You can ragchew, pass traffic, send grid square beacons, or even broadcast a message to any station listening.

And it's asynchronous—you don't need to be rigidly time-synchronized to the second like you do with FT8. You can jump into a QSO mid-message, respond on your own timing, and it all still works. That alone takes a bit of the pressure off and makes it feel more relaxed.

Another great use for JS8Call is when the bands are marginal. If you're staring at your S-meter and seeing almost nothing, try tossing out a JS8Call beacon. You might be surprised to get a ping back from halfway across the world. Because the mode is so efficient, it can give you a real sense of band conditions when SSB or CW seem silent. In fact, some hams use it specifically as a propagation tool—just beacon out every 10 minutes on 20 meters and see who comes back. Instant real-time propagation map, no internet needed.

JS8Call Frequencies

From version . 0.5.x the default calling frequencies set up in JS8Call are listed below, but please note these are not set in stone and can easily be changed in your settings, or you can simply manually retune your radio to another frequency.

1.842Mhz	3.578Mhz	7.078Mhz
10.130Mhz	14.078Mhz	18.104Mhz
21.078Mhz	24.922Mhz	28.078Mhz
	50.318Mhz	

Suggested JS8Call Frequencies. Photo: www.js8call.com

HOW JS8CALL WORKS

Calling CQ with JS8CALL is also very flexible and different from FT8. You're not limited to the precise sequence that FT8 forces. You can send "CQ CQ CQ de W7UUU W7UUU W7UUU K" or just "CQ de W7UUU" - just like you could using CW, phone, or most any other mode. There's no rigid structure like there is with FT8 meaning you're not concerned about the precise 15-second transmission cycles.

To get started, all you need is a rig with CAT control and an audio interface, just like you would for FT8 or PSK31. Many (most?) modern HF rigs for sale today have a built-in USB port that feeds an internal sound card. So your IC-7300, IC-7610, FTDX-10, etc. already has the capacity built-in to run JS8Call.

But older rigs without a USB port can easily adapt using a SignaLink USB, a RigExpert interface, or even a sound card with VOX control can do the job.

JS8Call runs on Windows, macOS, and Linux, and the install process is pretty painless. Once you've got your radio configured and audio levels dialed in, you're good to go. The program even lets you monitor the JS8Call waterfall while decoding messages live, so you can see where the action is.

JS8Call really shines over FT8 and behaves like any other mode, with contacts in mind other than just Call, QTH, and RST. You won't get 50 contacts an hour like you might on FT8, but you will have some thoughtful back-and-forths with folks who genuinely want to exchange more than just "hi and bye." There's a slower, friendlier vibe to the whole thing. And sometimes, that's exactly what the hobby needs—less automation, more actual human contact. All the while taking great advantage of the extreme low-signal decoding that was created for FT8.

So if you're looking to branch out from the usual FT8 grind and want to try something with the same technical backbone but a lot more soul, give JS8Call a spin. Fire it up, beacon your call, and maybe type out a friendly "CQ JS8 de YOUR CALL" into the digital ether. You never know who might be out there, listening in the noise, ready to say hello and chat for a while.

You can visit the JS8Call site at THIS LINK to download the software and full documentation to get you up and running with this mode.

-Dave W7UUU

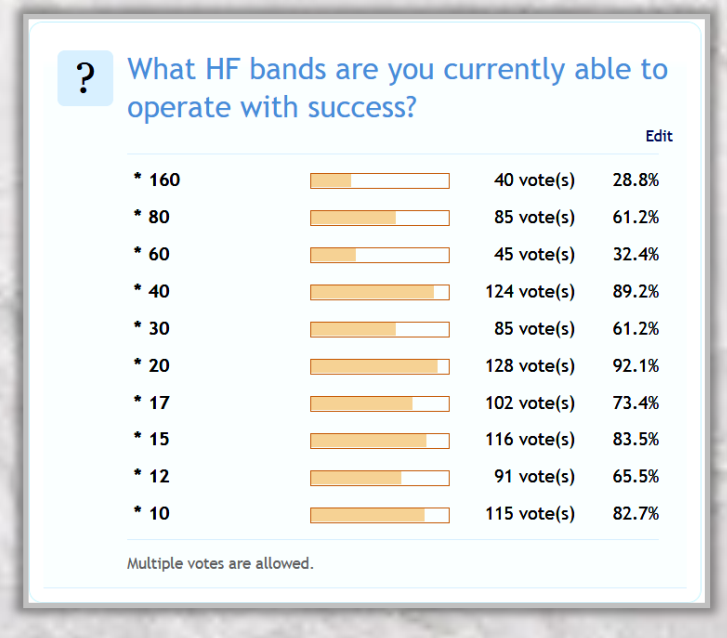
JS8Call

STRAY TOPICS OF INTEREST

Fun stuff for Hams to read!

W7UUU

Survey Center!


What HF bands are you currently able to operate with success?
Edit
* 160 40 vote(s) 28.8%
* 80 85 vote(s) 61.2%
* 60 45 vote(s) 32.4%
* 40 124 vote(s) 89.2%
* 30 85 vote(s) 61.2%
* 20 128 vote(s) 92.1%
* 17 102 vote(s) 73.4%
* 15 116 vote(s) 83.5%
* 12 91 vote(s) 65.5%
* 10 115 vote(s) 82.7%
Multiple votes are allowed.

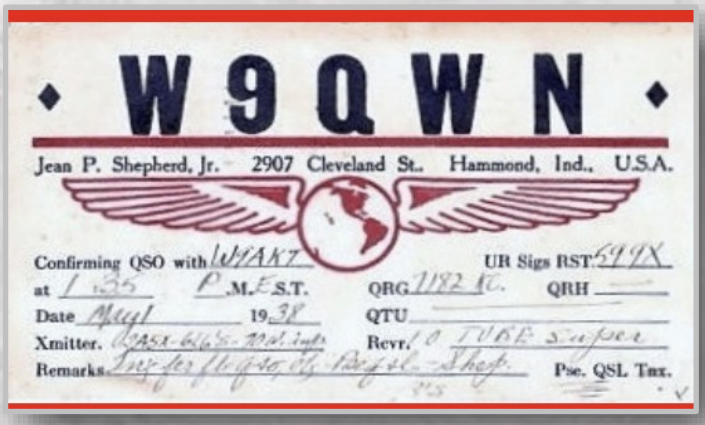
LAST MONTH IN THIS COLUMN, I presented the poll, "If you could only have a single band, what would it be?". So this month, in a poll that I started at QRZ.com back in September 2024, I asked "What HF bands are you currently able to operate with success?" with respondents able to pick as many as they wish. I left it to the voters to define "success".

The results are very encouraging! It appears that a LOT of hams have access to a LOT of the HF bands these days! As expected, 20 and 40 are the leaders of the pack. But a full 28% claim "successful operation" on 160—wow!

And of course, this is an utterly unscientific poll and only reflects QRZ users that actually took the time to go to the Survey Center subforum and respond. I always get cranky emails from "pundits of precise" that my polls each month are rubbish because I don't use "scientific polling methods". So if that's you, just use your index finger or mouse and "spin the page".

-Dave W7UUU

QSL Card of the Month


W 9 Q W N
Jean P. Shepherd, Jr. 2907 Cleveland St. Hammond, Ind., U.S.A.
Confirming QSO with W9AKT
UR Sigs RST 579X
at 1135 P.M. E.S.T. QRG 1182 kc. QRH
Date May 1 19 38 QTU
Xmitter. 45X-6L6-807 Ind. Rcvr. 10 TUBE Super
Remarks Snyder Hughes Fly Parfet Shep.
Pse. QSL Tnx.

In keeping with this month's Famous Ham Birthday, this is a QSL card from 1938 issued by Jean Shepherd W9QWN (later K2ORS) to W9AKT (who in 1938 was Karl Medrow of St. Madison, Wisconsin). Shepherd was a very active ham, and a prolific fan of QSL cards—many of his cards are still out there to view and often show up on eBay for sale.

-Dave W7UUU

Shepherd's unassuming house at 2907 Cleveland Street, Hammond, Indiana at the time of the QSO / QSL above

The RCT hasn't always had the nicely finished upstairs HF room and Museum stations we now enjoy. Back in the 1960s, the upstairs was an unfinished attic space used for storage. The radio room was downstairs, sometimes in the space we now call "The Lou Room" or in the main classroom space. This photo shows the Collins S-Line station the club was using around 1970 as it was located where the classroom is now, ca. 1970. The S-Line was the pinnacle of ham gear at the time—sort of the Elecraft K4 or Flex 6600 of its day. The far left I believe is the 32S-3A transmitter, in the center is the 75S-3 receiver, and on the far right the 30L-1 KW amplifier. I'm sure if I'm not spot-on with the exact model numbers, someone will email to correct me! This station was in use for many years at W7DK.

W70S DOC SPIKE MUSEUM

Featured Gear from the Museum

Photos & Text by Dave W7UUU

BACK IN 1962, HEATHKIT INTRODUCED THE HR-20 as a companion to their HX-20 mobile SSB transmitter. This duo was designed for amateur radio enthusiasts who wanted to operate on the go without compromising on performance. The HR-20 is a single-conversion superheterodyne receiver, covering the 80 through 10 meter bands—and while primarily designed for SSB operation, it could also receive AM and of course CW (but lacks any sort of CW filtering, so perhaps not ideal).

Heathkit HR-20
Photo by Dave W7UUU

One of the standout features of the HR-20 was its design tailored for mobile use (even though many were used in home shacks as well), It operated on 12 VDC, making it suitable for vehicle installations. The receiver uses a 3.0 MHz IF with a hermetically sealed crystal filter, providing selectivity of 3 kHz at -6 dB and 10 kHz at -60 dB.

There's no internal speaker so an external speaker (often the model AK-7) is required. The 12v power supply is not internal to the receiver, and was sold separately as the HP-10. It was transistorized and could power both the HR-20 as well as the matching HX-20 transmitter for mobile operation.

For home station use on AC mains power, the HW-20 was the suitable power supply for 115v AC operation.

The design is based on 7 tubes plus OA2 regulator, with a single-conversion IF scheme.

At the time, the HR-20 was considered a very solid performer with excellent specifications and made for a great HF setup when paired with the matching HX-20 transmitter. Of course, two boxes this size (12.25" wide, 6.25" high, and almost 10" deep) would never fit well in a modern car! But vehicles in the early 1960s had plenty of space below the often-huge metal dashboard of that era. Selling price was $134.50 less power supply ($1420 today).

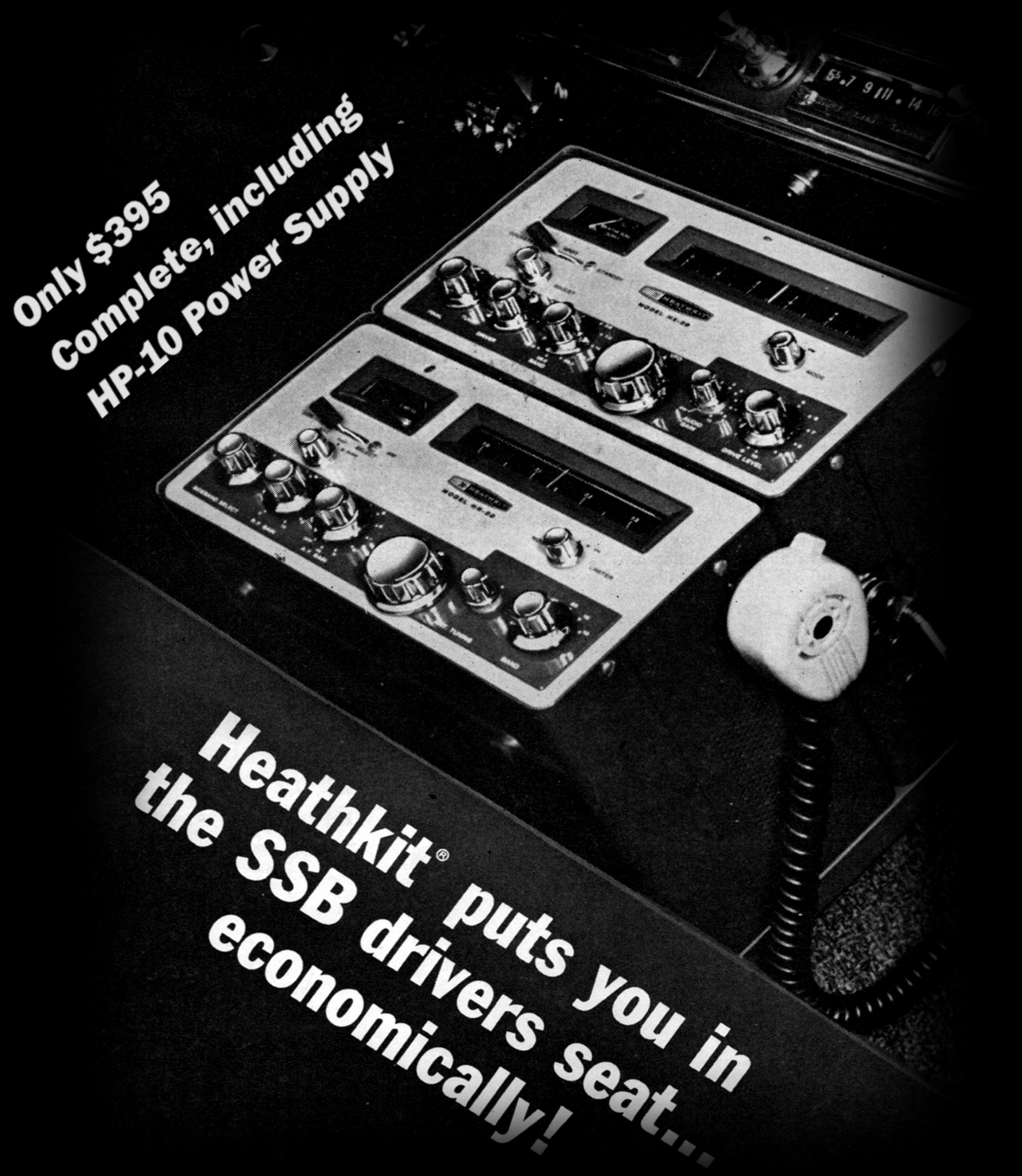
In years past, this actual receiver was used for Straight Key Night at the RCT clubhouse and I had the pleasure of using it and can honestly say the HR-20 is a pretty delightful radio to use, and has that truly iconic look only Heathkit could have come up with.

-Dave W7UUU

W70S DOC SPIKE MUSEUM

Featured Gear from the Museum

Dave W7UUU



W7OS DOC SPIKE MUSEUM

Featured Gear from the Museum

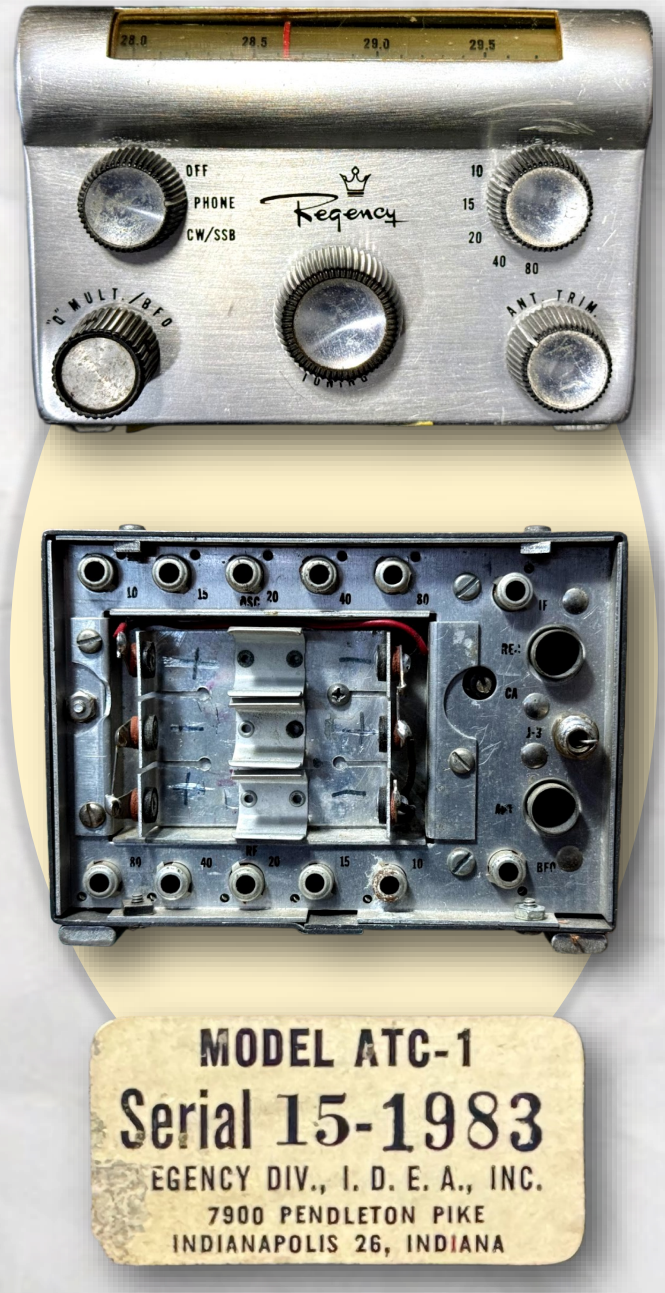
Photos & Text by Dave W7UUU

THE REGENCY BRAND OF RADIOS WAS AROUND for a long time—founded in Indianapolis as I.D.E.A, Inc. in 1945 by former RCA employees. The company originally focused on electronic consulting and engineering for companies looking to expand into the growing world of consumer electronics that was booming at the time.

In a partnership with Texas Instruments, Regency in 1954 developed the TR-1, the world's first commercially manufactured transistor radio which reached retail stores just in time for Christmas, 1954. The TR-1 was a massive success, selling around 150,000 units, driven by it's novelty and tiny size. And it was all made in the U.S. including all the internal parts themselves. Launch price was $49.95, or about $400 today! Despite the vast number sold, the TR-1 today is still a highly sought-after collectible, very frequently fetching prices from $300 to $800 on eBay for examples in working condition.

The unexpected explosion of interest in the TR-1 drove Regency to start thinking up new products to bring to market using the latest transistor tech that was coming to market.

The Regency ATC-1 (pictured right) was born in 1957 from that effort. It was an HF converter for the 80 through 10 meter ham bands, complete with a BFO for CW and SSB operation, designed to interface to the standard AM radio found in cars at that time. Signals in the ham bands were converted in frequency to appear on the AM radio in the car when it was set to a user-determined unused AM band frequency.



Regency ATC-1 HF converter currently in the RCT W7OS museum collection, showing the clean and simple front panel layout, and the rear panel with the many band alignment controls as well as the battery compartment.

Photos by Dave—W7UUU

W7OS DOC SPIKE MUSEUM

Featured Gear from the Museum

Photos & Text by Dave W7UUU

While it wasn't a new concept (Gonset and other companies had sold HF receive converters for years), and performance was almost entirely determined by the AM radio that was in the car, it was cutting edge in the sense it used transistors, not tubes, and operated from three 1.5v AA batteries or from 12v from the car's power distribution. Presumably battery operation would have been for portable or home use.

Selling price was $39.95 ($425 today) but not all that many were sold—likely fewer than 5000 units. This makes the ATC-1 pretty rare but a great representative of early adoption of cutting-edge transistor technology.

You can see this converter in the W7OS museum, SE corner, way up high on the shelf.

-Dave W7UUU

The first commercially manufactured transistor radio, the Regency TR-1 from 1954
Photo by Cmglee, Wikipedia

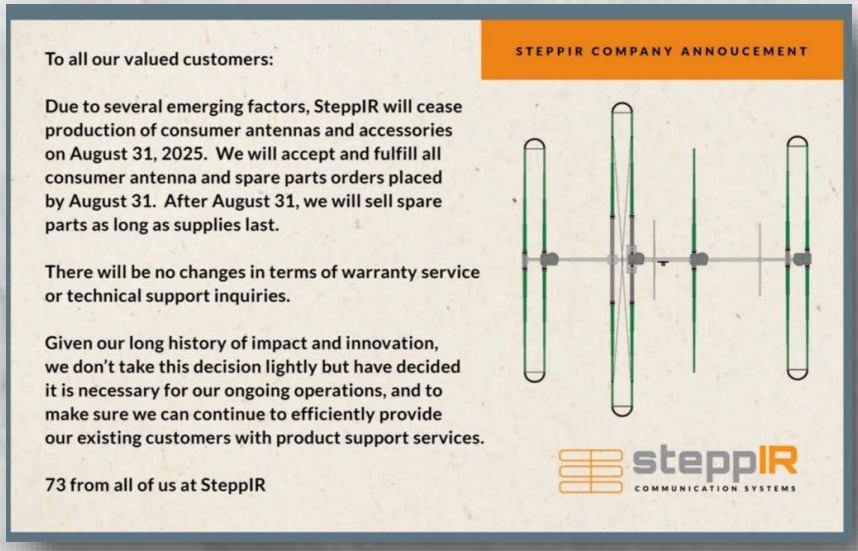
This 1955 photo (by John Pies, via the Regency TR-1 website) shows the brand new I.D.E.A. (Regency) factory at 7900 Pendleton Pike, Indianapolis, Indiana plant where the TR-1 transistor radio, and later the ATC-1 converter were built. Ultimately, millions of Regency radio products were shipped from this location well into the very early 1990s.

ANTENNA TIME

SteppIR Leaving Amateur Radio

Dave W7UUU

NEWS OF ANOTHER BLOW TO THE SUPPLY CHAIN OF AMATEUR RADIO gear came in recent days. SteppIR Communication Systems, headquartered in Bellevue, Washington, recently announced it will shut down its amateur radio and consumer antenna production as of August 31, 2025. Per the company, the decision, while difficult, reflects a shift in focus for SteppIR toward its commercial and military business sectors, which have grown in both technical scope and financial importance. In its public statement, SteppIR emphasized its appreciation for the amateur radio community's support over more than two decades and assures customers that it will fulfill all existing antenna and parts orders through the end of August. After that date, remaining spare parts continue to be offered based on available inventory. Warranty support and technical assistance also remain in place for the foreseeable future.



STEPPIR COMPANY ANNOUCEMENT

To all our valued customers:

Due to several emerging factors, SteppIR will cease production of consumer antennas and accessories on August 31, 2025. We will accept and fulfill all consumer antenna and spare parts orders placed by August 31. After August 31, we will sell spare parts as long as supplies last.

There will be no changes in terms of warranty service or technical support inquiries.

Given our long history of impact and innovation, we don't take this decision lightly but have decided it is necessary for our ongoing operations, and to make sure we can continue to efficiently provide our existing customers with product support services.

73 from all of us at SteppIR

steppIR COMMUNICATION SYSTEMS

Since its founding in 2001, SteppIR is recognized in the amateur radio world for pioneering a very innovative, albeit expensive, approach to antenna design. Unlike traditional antennas with fixed-length elements, SteppIR systems use stepper motors to physically adjust the length of antenna elements in real time. This allows for real-time adjustment of the antenna to any resonant frequency within the model's range—something not possible with conventional Yagi designs. By adjusting the copper-beryllium tape conductor element length inside fiberglass tubes (often referred to as "the trombones"), users experience continuous frequency coverage without the need for traps, loading coils, switching, or antenna tuners.

Or in other words, it's a fully resonant monoband Yagi on any single frequency covered by the model.

Among the most well-known antennas produced by SteppIR is the original 3-element Yagi, which offers coverage from 6.95 to 54 MHz. This model features motor-driven elements that can be tuned across the HF spectrum—ham bands or otherwise—with remarkable precision and includes the option of a 40/30-meter dipole add-on. Another popular variation is the DB18E, which covers 40 through 6 meters. It's a 3-element Yagi on all bands above 40, and configures as a 2-element Yagi on 40. See the next page for photos of my own recently-installed DB18E at 70' on my tower.

A simpler 2 element version offers a more compact solution. A few years ago, SteppIR introduced the UrbanBeam, a very space-efficient model specifically designed for installation in an HOA or for folks with smaller lot sizes. The UrbanBeam shares the same principle of dynamic tuning but packages it into a form factor more suitable for suburban and urban hams, hence the name.

SteppIR is also well known for its line of vertical antennas. The BigIR Mark IV is a full-size vertical covering 40 through 6 meters, with an optional 80-meter add-on. It functions as a true quarter-wave vertical on each band, eliminating many of the compromises of traditional multi-band verticals. The SmallIR offers similar performance but in a more compact design, covering 20 through 6 meters. For portable and field use, the CrankIR vertical provides manual band switching and mechani-

ANTENNA TIME

SteppIR Leaving Amateur Radio

Dave W7UUU

cal adjustment, allowing operators to set up quickly in remote locations with full coverage from 80 through 2 meters.

All of these antennas rely on proprietary controllers, initially the SDA-100 and later the more advanced OptimizIR 2.0. These controllers are what handle the programming of the antenna's functions. Once set up, you simply dial in the frequency you want to be resonant on and wait a few seconds for the copper tapes to achieve that setting. And you can do this even if the desired frequency isn't a ham band—you can just as easily peruse shortwave stations on 19 meters! (15 MHz band).

It's pretty obvious the advantages SteppIR offers hams are significant. Being gain antennas, the SteppIR Yagis can be fine-tuned every 25 kHz, providing amazing gain and making for a near-perfect SWR no matter what frequency you want to use. And you get this performance across the entire HF spectrum (that the particular model covers).

Probably the single coolest feature of a SteppIR Yagi is a single button-press to cause a nearly instantaneous 180-degree direction reversal. It's equivalent to "swinging the beam" from North to South in just a few seconds, then back again. There is also a "bidirectional" feature that causes the antenna to provide excellent forward gain but in *both directions* at once! This is great for contesting.

Still, SteppIR's technology is not without its complexities. They are called "SteppIR" because the use high-grade stepper motors on each element to adjust the length of the copper tapes electronically. So there's a lot of moving parts high in the air that are not easy to service if things go south. For years, this has been a sticking point for many hams (myself included, despite the fact I took the plunge for a DB18E).

They are also *very* expensive—the price today of the DB18E is $7,550!.

Regardless, it's always sad to have a major manufacturer leave the amateur radio market. It's been a bad few years in that regard. And may my DB18E last long enough that I won't care the day it ultimately fails and can no longer be serviced. Sigh.

-Dave W7UUU

SteppIR DB18E at W7UUU installed May 2023 at 70 feet
Photos by Dave W7UUU

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COOL GEAR!

Interesting Bits of Gear Any Ham Can Use

By W7UUU

ARE YOU A DEVOTED CW OPERATOR? MAYBE JUST learning the code? If you have any involvement in Morse as a ham, in my opinion you owe it to yourself to try the Putikeeg model 20 straight key. Many readers probably won't know that name, but Putikeeg has been around for about 10 years and specializes in design and manufacture of Morse keys (among other products). Yes—of course they are Chinese—otherwise this key wouldn't cost $108 USD it would cost $700 but that's the way things are.

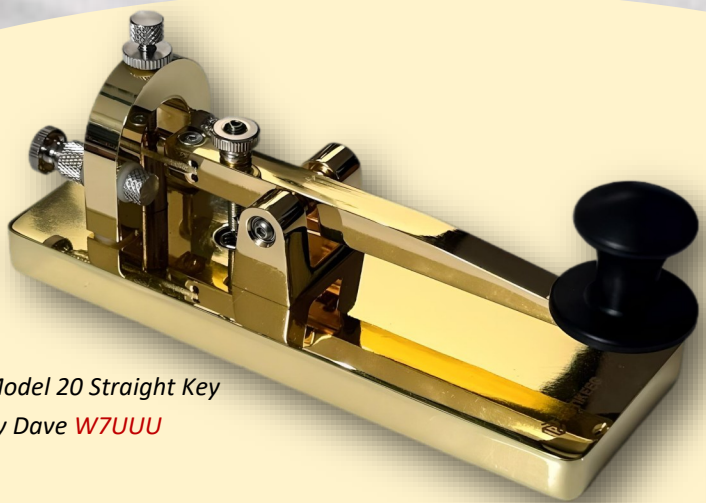
The Putikeeg Model 20 came to my attention from Rich KR7W— but I've been using a Putikeeg "mini iambic paddle" for a couple of years for POTA activations. I had not heard of nor seen their Model 20, so I decided to order one and see what it was all about. I have to say, the Putikeeg Model 20 is in fact one of the nicest straight keys I've used in ages! Great balance, great feel, and it never moves around—at all! I love this key and for the price, I can recommend it to anyone looking for a fun new straight key for shack or for SKCC use.

Thanks to Rich KR7W for telling me about it in the first place. And no, this is NOT a "paid endorsement".

-Dave W7UUU

Putikeeg Model 20 Straight Key in my shack—it's connectorized so it can move from my "Big Rig" (FTDX-101MP) to any other rig in the shack
Photo by Dave W7UUU

PUTIKEEG



My Putikeeg Model 20 Straight Key
Photo by Dave W7UUU

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10 Most Popular Ham Radio Modes

2025 Update: Based on numerous internet searches, the following list are the ten most popular ham radio modes in use today based on volume of QSOs. Obviously, such a table can never be considered absolutely accurate as there are many criteria at play. But this is a general census of mode popularity across the ham radio band spectrum as of the time of this writing (May 27, 2025) *-Dave W7UUU*

1	FT8 (of course!)
2	SSB—Single Sideband
3	FM—Frequency Modulation
4	CW—Morse Code operation
5	RTTY Radio Teletype
6	PSK31
7	DMR—Digital Mobile Radio
8	D-STAR
9	APRS Packet Reporting
10	JS8Call

Upcoming Ham Fests in the Area

Data published with permission from Lynn at N7CFO.com

July 12 & 13. Salmoncon, the annual gathering of low power (QRP) ham radio operators. Valley Camp, North Bend, WA. https://www.pnwqrp.org/salmoncon

July 18-20. Glacier Waterton Hamfest. East Glacier, Montana. *This is an ARRL Sanctioned Event.* https://www.gwhamfest.org/

July 19 Kenai Peninsula Hamfest, Kenai, Alaska. *This is an ARRL Sanctioned Event.* https://al7le.org/

July 19. Richmond Amateur Radio Club Swap Meet & Emergency Communications Display, Richmond, BC. https://hambone.ca/rac/events/detail.php?event_ID=2417 http://www.richmondarc.ca/swapmeet2025.html

July 26. Chehalis Valley ARC Swapmeet. *This is an ARRL Sanctioned Event.* Lewis County Fairgrounds 1909 S. Gold Street, Centralia, WA Flyer in PDF.

August 9. 2025, 0800 - 1300 hrs. ARRL Idaho State Convention sponsored by the Kootenai Amateur Radio Society. *This is an ARRL Sanctioned Event.* River of Life Friends Church 3263 E. 12th Ave. Post Falls, ID. Contact: Cliff Pratt, K7CVP. (208)620-8589. k7cvp.id@gmail.com

Radio Club of Tacoma Ham Fair 1970

HAM TECH 101

By Jim AF5NP

Useful tech info for newer hams and old

Morse Code for CW Mode

This column is reprinted monthly with permission of AF5NP from his blog www.NEWHAMS.info

Most people recognize Morse code even if they cannot decipher the sounds. It's one of those things that we hear in old movies and TV shows and occasionally in radio or TV ads. As a ham you may hear it on local repeaters and HF voice for identification.

T1F05-2018: What method of call sign identification is required for a station transmitting phone signals??
Send the call sign using a CW or phone emission

Continuous Wave (CW), where the signal is modulated by Morse code, is the original amateur radio mode, and has a long history with hams. Other telegraph codes exist but in ham radio when we say Morse code we mean International Morse code.

T8D09-2018: What code is used when sending CW in the amateur bands?
International Morse

For decades Morse code proficiency was a requirement for amateur radio licensing in most countries with speed increasing proportional to license class/privilege. Morse code requirements for all license classes ended in the USA in 2007 (Technician dropped in 1991), opening doors to many hams who were otherwise interested in getting licensed but found Morse to be a real obstacle. This followed an ITU agreement in 2003 that Morse Code testing of radio amateurs would no longer be an international requirement.

Does this mean Morse code is dead? Hardly! While the number of CW (Morse) operators is fewer in number now than 50 years ago, there are still thousands of active hams whose primary (or even only) mode is CW. Why? Besides being fun and challenging, CW has some real advantages:

Because nearly all the transmitter power goes into a narrow (~100Hz) signal, practically all signal power is useful, as opposed to phone (voice) modes.

T8A05-2018: Which of the following types of emission has the narrowest bandwidth?
A. FM voice
B. SSB voice
C. CW
D. Slow-scan TV

Sometimes when SSB voice signals are inaudible due to poor skywave propagation, CW signals punch right through. In fact, many rare stations (DX) primarily use CW mode to reach more hams eager to work an odd location. A CW signal can have more than a 10-20 dB advantage over a SSB signal.

T8A11-2018: What is the approximate maximum bandwidth required to transmit a CW signal?
150 Hz

Additionally:

- The signal to noise ratio (SNR) is much better, making communication much more effective.
- Adjacent noise or signals (QRM) can be filtered much easier in the receiver with a narrow CW signal.
- Due to CW's efficiency, lower power radios work well, and can run longer off-grid.
- CW-only radios are small, simple, and cheap, with more bang for the buck.
- Finally, a few hams prefer not to use their voice, and CW (along with digital modes) frees them up from being disabled or mic shy.

HAM TECH 101

Useful tech info for newer hams and old

Morse Code for CW Mode

In addition to these general advantages, CW mode is the only high frequency (HF) mode that USA Technician class licensees can operate below 28MHz. So Techs can actually make contacts using Morse on 80, 40, and 15m, outside their typical 2m local FM repeater range.

Perhaps Morse is intimidating to you as a prospective ham or Technician class licensee who wants to communicate beyond the local area. Even though we no longer need to know Morse to get a license, the reasons above should give you some incentive to learn it. Besides, it's really not as tough as it might seem. And even though some hams blaze away above 25 words per minute (WPM), you can always send/receive slower at a more comfortable beginner's pace and work through your mistakes.

While Morse may seem like a second language to most people, it is actually much simpler and easier to master than a new tongue with all its complexities. You need know only 26 alphabet symbols, 10 numbers, and several punctuation marks and common shortcuts to be proficient.

So how does one go about learning Morse code and using it? The Boy Scouts had a merit badge for Morse and the military may still teach you but these are less common nowadays. Don't despair; there are many resources for learning Morse, some linked below. Here are four suggested steps:

Learn to receive Morse code- the important beginning stage to become familiar with letters, numbers, and punctuation. Just learn it; you don't have to be fast.

Learn to send Morse code- it is important to have a good "fist" for others to copy at any speed; this involves timing, practice and good habits.

Learn CW/Morse ham radio procedures- know what certain prosigns mean and how hams perform an exchange or QSO.

Practice off-air with a CW Elmer or experienced friend.

Then you're ready to try for real over the radio!

You have many resources available to learn Morse and CW protocol: stand-alone PC apps, online apps, and some clubs or organizations geared towards not only learning Morse but also training for real contacts. See the following links.

One thing many of these training tools have in common is the Koch method and Farnsworth timing, which is considered an improvement over rote learning with gradual speed increases. Most people have a natural limit to their ability to copy or send above a certain rate (wpm). No matter; you can still enjoy CW at most any speed.

Of the links below to various Morse resources, the last one is truly useful and interesting and worth checking out: All About the Telegraph and Deciphering Morse Code. Thanks to **Noah Bass** for suggesting this excellent resource. He found it while working on his Boy Scouts radio merit badge.

Perhaps you're interested in learning Morse in CW mode but find the protocols intimidating? There are groups of

HAM TECH 101

Useful tech info for newer hams and old

Morse Code for CW Mode

hams to train and encourage good CW practice, such as CWops and LI CW club. One that the author likes is the Straight Key Century Club (SKCC), which promotes non-electronic Morse sending using purely mechanical keys (not computerized or electronically aided). By definition it's mostly slow-paced, as not many folks can send more than 20wpm using a straight telegraph key. It's free and members mainly do simple exchanges to gain low-stress experience. They are a generally supportive and helpful bunch who tolerate newbies and coach them along.

By the way, when describing Morse code, hams don't use the terms dots and dashes, even though it may look like that on paper. We say dits and dahs, which aligns more with how it sounds, as opposed to how it looks.

Useful web links

The Endurance of CW in Amateur Radio

Morse code is still worth learning – but why?

Become a Morse Code Expert

Morse Code World

Just Learn Morse Code -PC app which author likes

CWops CW Academy– highly regarded way to learn both Morse and procedures

Learn Morse Code-CW with the Long Island CW Club, another highly-regarded resource

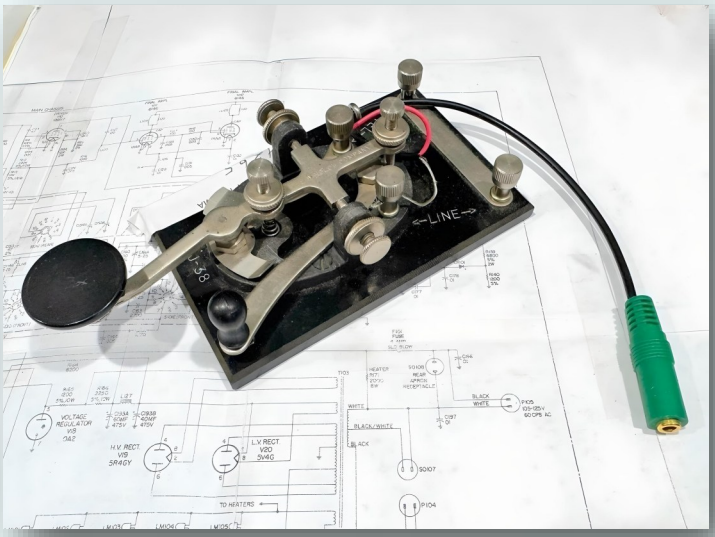
Learn Morse Code (CW) Online

Learning Morse Code – ARRL

American Morse Code -Somewhat different from international (modern), because of telegraph sound

All About the Telegraph and Deciphering Morse Code. Thanks to Noah Bass for suggesting this excellent resource. He found it while working on his Boy Scouts radio merit badge.

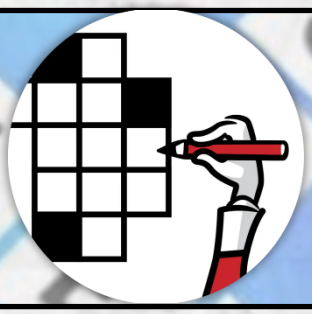
-Jim AF5NP



Photos by Dave W7UUU

FUN AND GAMES!

Crosswords, Word Search, etc.



Word Scramble Challenge! Print this page to play!

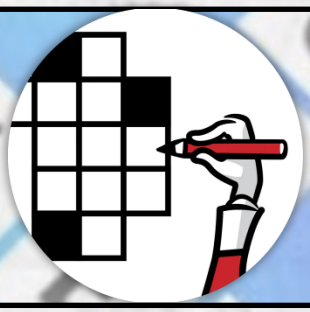
1. TSARRMNEITT _____
2. CEVEIRRE _____
3. EETEOANRGNIR _____
4. NTIAEIOTORN _____
5. RNEOOTMTETPEI _____
6. RSOTRESI _____
7. ARSAFTLREHLIC _____
8. CCOTIRPAA _____
9. SLOPSOCOCIEL _____
10. RENGILOW _____
11. TTERTAOAUN _____
12. HNMLMAUADR _____
13. ONEECSRAN _____
14. CSLOIRLTOA _____
15. ETYHONEEDR _____

WORDS TO FIND:

Regeneration Orientation Transmitter Potentiometer
Resistor Hallicrafters Capacitor Receiver Oscilloscope Longwire
Attenuator Hammarlund Resonance Oscillator Heterodyne

FUN AND GAMES!

Crosswords, Word Search, etc.



Answer Key… but don't cheat!

1. TSARRMNEITT _____Transmitter
2. CEVEIRRE _____Receiver
3. EETEOANRGNIR _____Regeneration
4. NTIAEIOTORN_____Orientation
5. RNEOOTMTETPEI _____Potentiometer
6. RSOTRESI _____Resistor
7. ARSAFTLREHLIC _____Hallicrafters
8. CCOTIRPAA _____Capacitor
9. SLOPSOCOCIEL _____Oscilloscope
10. RENGILOW _____Longwire
11. TTERTAOAUN _____Attenuator
12. HNMLMAUADR _____Hammarlund
13. ONEECSRAN _____Resonance
14. CSLOIRLTOA _____Oscillator
15. ETYHONEEDR _____Heterodyne

WORDS TO FIND:

Regeneration Orientation Transmitter Potentiometer
Resistor Hallicrafters Capacitor Receiver Oscilloscope Longwire
Attenuator Hammarlund Resonance Oscillator Heterodyne

About this Publication

The Logger's Bark is the official publication of the Radio Club of Tacoma and is published by RCT, PO Box 11188, Tacoma, WA 98411. The Radio Club of Tacoma is a non-profit corporation as defined by law. All proceeds will be used exclusively for charitable and educational purposes. The Radio Club of Tacoma's Club House is located at 1249 Washington St, Tacoma, WA 98405, phone: 253-759-2040.

Emailing Officers

To contact any club officer, simply send an email to their call sign @W7DK.org

Contributions of Articles & photos

We WELCOME contributions of articles, guest editorials, blurbs, Hints-and-Kinks, shack photos, QSL cards, memorable contacts, anything of interest to your fellow members. Submit your materials via email to: loggersbark@gmail.com or via US mail to PO Box 11188, Tacoma, WA 98411 Nichrome

Radio Club of Tacoma Repeaters

Central Tacoma 2m:	**147.28 + PL Tone 103.5**
Central Tacoma 70cm:	**440.625 + PL Tone 103.5**
Crawford Mountain:	**147.380 + PL Tone 103.5**
North Tacoma:	**145.21 - PL Tone 141.3**

The Loggers Bark ***does not*** accept AI / ChatGPT submissions

Membership Information

- Full-time students, licensed or non licensed, up to age 25 are $20 per year.
- Fees are applicable for the calendar year: January to December
- Lifetime membership is 20 times the yearly fee you are eligible for. Lifetime memberships are calculated based on the FULL and ASSOCIATE rates.
- Visit www.w7dk.org For the latest and most current information on events and activities

MEMBERSHIP APPLICATION

CLICK HERE!

Have a submission for our next issue?

loggersbark@W7DK.org

BOARD OF DIRECTORS

Board-approved minutes from the most recent meeting

Radio Club of Tacoma
Board of Directors Meeting Minutes
May 7th, 2025

Meeting called to order at. 1900

Officers and Directors Present

__X_	President	Adam Barbera W2NCC
_____	V. President	Manny Adonis AD7MA
__X_	Secretary	Gary McAdams WG7X
__X_	Treasurer	Doug Schafer AB7DG (Temp)
__X_	Board	Dan Vacanti KD7SV
_____	Board	Dave Ashley W7GEL
__X_	Board	Doug Schafer AB7DG
__X_	Board	Mike Drorbaugh W7MKE
__X_	Board	Paul Matney W7PFU

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Quorum? 5 of 9 Officers / Directors needed. ___Y____

Motion for approval of Minutes as previously distributed: Motion made by: Mike W7MKE seconded by Doug Schafer; motion carried.

Silent Key or Illness? Dave Brooks N7HT was in a car accident, his situation unknown at the time of this meeting. We will keep advising.

Bruce Hanson is still in recovery status only able to use a walker.

President's updates:

The club's trustee appointment was made by President Adam, W2NCC at the general meeting.
Gary, WG7X is the new trustee. Forms had been submitted to ARRL VEC for processing by FCC.
WG7X is now the official trustee for W7DK: license copy attached.

President Adam, W2NCC reports that the Eagles club lease has been renewed. The cost is the same as last year, $175 per month.

Secretary's Report (Gary WG7X)

Nothing of note this month. Little to no correspondence to report. Just the usual applications and bank statements.

Treasurer's Report (Doug Schafer as Temporary Treasurer)

See the attached report. Doug comments that everything is now routine. He also explained the report and what all the columns mean. We are in good hands with Doug.

Committee Reports

Property Management (Red WB7EC)

Red reports $93 from PMT sales last month. Red also reports that PMT is slowly getting back into shape in the lockup. Mike, W7MKE reports that he has the 6-meter beam for field day, Red acknowledged that: beam is earmarked for field day activities now.

Some discussion about possible items set aside for the Sea-Pac ham fest. Consensus was to only take current and saleable items, no boat anchors.

The Property Management team request permission to dispose/recycle the following excess items from the Board of Directors of the Radio Club of Tacoma. Mike W7MKE made the motion Gary WG7X seconded the Motion. Motion carried.

1.	RCT 4406	ICOM ID-5100A VHF/UHF Mobile	SN: 05003718
2.	RCT 4407	ICOM IC-71A HF RX	SN: 04300
3.	RCT 4408	Kenwood HF XCVR TS-520S	SN: 810595
4.	RCT 4409	Kenwood Speaker SP-230	SN: 3070043
5.	RCT 4410	Kenwood Speaker SP-901	SN: NA

Facilities Management (Adam W2NCC)

President thanks David AC7KP for keeping the lawn in good shape and mowed. President also mentions that he was in the process of getting handrails for the front steps. It was pointed out that handrails are available at Home Depot for very reasonable prices.

BOARD OF DIRECTORS

Board-approved minutes from the most recent meeting

W7DK

General Meeting (Dave W7UUU)

Dave mentioned that Doug Oakman will be doing a presentation on emergency services at the Eagle's club-house for the May meeting this coming Saturday, May 9th, 2025. Doug will need assistance with setting up the various equipment.

Dave also mentions that the June meeting will be the video about Nick Winters video. lifetime. He also asks that the contributions come this week because he will be traveling a lot for the next couple of months.

HF Operations(Phil K7PIA)

Phil reports that everything is nominal in the HF room. Contests are coming up, but slim pickings in the summer, but he did mention an ARRL summer digital contest and the CQWPX CW contest. BJ, KO7T asked about the modes for the summer digital contest. Everything but RTTY is OK.

Info Tech and Website (Randy WB4SPB)

All systems are nominal. He reports that improvements are in progress for the NAS. Receipts will be submitted as things proceed.

Library (Doug AD7AV)

George K7GRS reports that there are two new bookshelves being installed as is the kiosk.

Membership (Mike W7XH)

Mike reports about a new ham kit for the club, he passed booklet examples for the assembled members to look at. This was started with John AC7WW and is still in progress with Stephen AD7AB and George K7GRS to bring the document to be current and present a professional face to prospective members. Will be in a PDF file to begin and a print version will be available as well.

Then he discussed an idea that he wants to discuss. He wants to go back to 2019 to 2023 (the covid years) and make a list of possibly still interested people. Then, he wants to offer a $20 membership for this year only and for "lapsed" members. This would be a one-time thing from today to the end of the year.

Mike W7MKE made the motion to have the lapsed members get the new a membership for the remainder of the year at the prorated price of $20. This option is presented only for members that let their membership expire in the years between 2019-2023. Gary WG7X seconded the motion. Motion carried.

BOARD OF DIRECTORS

Board-approved minutes from the most recent meeting

W7DK

That would represent 235 people getting email. We are 387 members currently.

Museum (Dan KD7SV)

Dan reports that there is not much going on at the museum. He has received some re-fit kits for some of the boat anchors: HW101, T-60 and SX101. He is also reporting that three wire safety cords are in the process of getting installed in the boat anchors. A fellow named Rodney came up to the museum to get his key /paddle fixed.

Planning Committee (Manny AD7MA)

No report

POTA (BJ KO7T)

BJ said that the last POTA had a good turnout, and he is looking forward to the next one. Next POTA May 18th Nolte Park. BJ also noted that Julie is doing the 2-meter net on doing the first Tuesday of the month.

Repeater Ops (AL N7OMS)

Crawford mountain seems operational. Bates is also operational. Al also reports that we are ready to go narrowband whenever the state coordinators say that it is time.

Training (Stephan AD7AB)

Currently scheduled Technician Class training sessions are located at the following Link:
Currently scheduled General and Extra Class training sessions are located at the following Link:

Tower (Adam W2NCC)

Adam reports that the “free” tray tables are a non-issue; He is working on pricing and availability at various vendors. It was suggested that he look at Home Depot, because they have the same stuff at a much lower price than the “professional” suppliers.

VE (Stephen AD7AB)

Tuesday April 8th, 2025, our VE team gave tests to seven people. All of them passed, with 5 new Technicians joining the service. One person upgraded to General, and one upgraded to Extra.

BOARD OF DIRECTORS

Board-approved minutes from the most recent meeting

W7DK

Thanks to the following VE's for their time and experience: Stephen AD7AB. Leonard KA7NWF, Phil KC7PS, James AI7OZ, Richard KK7VH, Mike W7XH and Brendan WA7BMK.

Total number of Candidates for JBLM (Joint Base Lewis McChord) Testing session: 4
Tech License(s) Granted: 3
General License(s) Granted: 1
Total Number of VE's: 5

Wednesday Workshop (Randy WB4SPB)

Randy reports: The now weekly Thursday "HF Night" activities have come to resemble what we have lately been doing on 4th Wednesdays. Randy proposes that, if no other member wants to assume the role of 4th Wednesday Activity Night Coordinator, this activity be deleted from the club calendar as a regular event. 4th Wednesday then becomes (along with 2nd and 3rd Wednesdays) an evening for which ad hoc activities can be scheduled (say, for a build project) according to the needs and preferences of project leaders and participants.

The Thursday night HF activity would become the Thursday night HF/ General activities night.

Unfinished Business:

Doug Schafer asked about the progress of the antenna planned for 40 meters going between the newly adjusted antenna locations.

Al, reports about the upcoming Rainier Baseball event still ongoing process. Dave W7UUU reports that he has not found his tickets. He was given advice from Al about finding the tickets.

Field Day, Mike reports that same location with some minor changes to the antennas and tent locations. We're going to just one 40-meter dipole / inverted "V" and will still be using the 80 meter "cage" antenna. 10 -15-20 antennas will all be on AB-577 "rocket launcher" towers and the towers will be closer to the tents. We will still be a 4A station.

New Business:

President reports that we have a deadline for the ARRL grants. President and Doug Schafer will coordinate this grant process.

Adjournment at: 2016

Secretary, Gary McAdams, WG7X

Attachments: Attendance sheets.

RADIO CLUB of TACOMA
ATTENDANCE SHEET
Board of Directors Meeting Minutes
May 7th, 2025

	NAME	CALLSIGN	RCT NUM
	ATTENDED at Clubhouse	**Only non-BOD members BOD at top of minutes.**	**Applies to Eagles and at clubhouse.**
1	BJ Rollison	KO7T	3001
2	Dave Stilwell	AC7KP	2073
	Attended via ZOOM		
1	Dave Ellison	W7UUU	743
2	Jeff Winget	W8NGS	3110
3	Red Cranefield	WB7EC	2561
4	Al Ferguson	N7OMS	2107
5	Dan Vacanti	KD7SV	2640
6	Phil Pia	K7PIA	2681
7	Randy Myers	WB4SPB	2050
8	George Salisbury	K7GRS	2586

Radio Club of Tacoma
General Meeting Minutes
May 10th, 2025

Meeting called to order at 1300

Officers and Directors Present

X	President	Adam Barbera W2NCC
	V. President	Manny Adonis AD7MA
X	Secretary	Gary McAdams WG7X
X	Treasurer	Doug Schafer AB7DG (Temp)
X	Board	Dan Vacanti KD7SV
	Board	Dave Ashley W7GEL
X	Board	Doug Schafer AB7DG
X	Board	Mike Drorbaugh W7MKE
X	Board	Paul Matney W7PFU

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Quorum? (10% of membership is needed to conduct business.): No

Flag salute led by: Mike Isakson W7XH

Visitors: None

New Members: None

Silent Key or Illness:

Dave Brooks N7HT was in a car accident, his situation unknown at the time of this meeting. We will keep advising. Dave is Life Care Center in South Hill Puyallup for rehab. His projected date of release is August 2025.

Bruce Hanson is still in recovery status only able to use a walker. Bruce is getting better.

Secretary's Report (Gary WG7X)

Nothing of note this month.

General Meeting Program (Dave W7UUU)

Doug Oakman did a presentation on emergency services at the Eagle's clubhouse for the May meeting this Saturday, May 9th, 2025. Doug did a great job with the ARES presentation. Handouts were provided and as usual, they were very professional and informative.

Doug Schafer AB7DG also contributed additional about local ARES and local EOC activity during the emergencies.

Chair /Committee Reports: No reports.

Announcements

President Adam mentioned some licensing testing being given by another club (M&K) that is giving training / testing.

Club member Jiro KW6A provided some details: Technician licensing class Saturday May 17th and Saturday May 24th, 2025, from0900 – 1700 both days. Class will be held at the St. Joseph Medical center at 1717 S. J Street Tacoma, WA 98405. Testing is free and the only cost for the training will be for materials at $15.00. KL7WM is the contact for the training or the test, so send an email to Daniel Stevens KL7WM @ AOL.com

Wade W7ITL talked about DATV at the clubhouse. They have made a DATV transmission to a DATV repeater on Cougar Mountain / Bellevue. There is a DATV station set up in the "Lou Room" in the clubhouse for these tests. Frequencies are in the 70 cm band transmit (14435.25 and 23 Cm receive (1255 MHz). The experimentation will continue.

Tuning & Traffic

None reported.

Show and Tell

Dave W7UUU told us that he now is an award-winning club presenter! He got an award for the W7UUU shack fire and restoration that he did for the Ozaukee Ham radio club in Wisconsin. The ORC gave him the 2024 Ozaukee WI club presenter of the year!

President Adam brought a nice assortment of "Milwaukee" tools and a small inverter / power converter. He bought these because the batteries in storage are always going bad. With the new inverter one set of batteries will power multiple devices and no more bad batteries. The inverter will 200 watts amps AC from a stand-

ard Milwaukee battery. It has multiple voltages available for charging small devices like cell phones.

Becky KG7FZH mentioned that there are going to be three presentations at Sea-Pac convention this year. BJ is going to do POTA, Becky and Sam will do kids in ham radio and Dave W7UUU will be giving his presentation on the big fire and stealth antennas.
Door Prize Won by: Wade W7ITL, a small SWR meter, Phil KC7PS got a joke book and Brad KK7YQC got a hat.

Adjournment at: 1413

Attachments: Attendance sheets.

RADIO CLUB of TACOMA
ATTENDANCE SHEET
General Meeting Agenda / Minutes
March 8th, 2025

	NAME	CALLSIGN	RCT NUM
	ATTENDED at Eagles	Only non-BOD members BOD at top of minutes.	Applies to Eagles and at clubhouse.
1	Leonard Burstiner	KA7NWF	2308
2	Mike Drorbaugh	W7MKE	2761
3	PAUL MATNEY	K7PFU	2546
4	ADAM BARBERA	W2NCC	2715
5	RANDY MYERS	WB4SPB	2050
6	WALT MOREY	WA7SDY	2763
7	DAVID STILLWELL	AC7KP	2073
8	DENNIS NELBACH	KJ7DDW	2866
9	MIKE ISAKSON	W7XH	2657
10	DAN VACANTI	KD7SV	2640
12	AL FERGUSON	N7OMS	2107
	ATTENDED VIA ZOOM		
13	DAVE ELLISON	W7UUU	742
14	RICHARD ? (I PHONE)		